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Hospital Library

Civilian Morale and the Professional Worker
Jules H. Masserman, M.D.

The Nutrition of War Workers
Robert S. Goodhart, M.D.

A Food Cost Control System in a Dietary Department
Ella M. Eck

Food Cost Accounting
G. P. Bugbee

Controlling Food Cost Through Menu Planning
Grace E. Smith

Keeping Soldiers and Civilians Nutritionally Fit
Mary I. Barber

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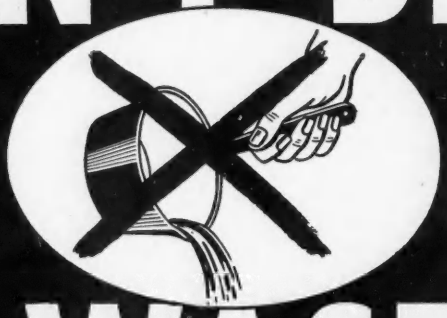

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Civilian Morale and the Professional Worker[1]

JULES H. MASSERMAN, M.D.
Chairman, Morale Advisory Council, Chicago Metropolitan Defense Area

MORALE, in simple terms, is the indispensably heartening community spirit felt by people who are working together effectively to attain common ideals and objectives. One corollary of this definition is at once obvious: morale is a psychological phenomenon that is characteristic of groups rather than of individuals. In other words, one does not speak of the morale of one citizen, a single soldier, or an individual dietitian; one must instead deal with the morale of a community, a factory, a scientific society or an army division. If, then, morale is a collective rather than an individual manifestation, how can we foster a strong, effective fighting spirit to sustain us in our world struggle against tyranny and oppression? Again, in accordance with our definition, let me outline three psychologically all-important steps:

First, we must set clearly before us our joint and unalterable goals: victory in this war, and justice, civilization and human brotherhood in the peace to follow.

Second, we must plan, thoroughly and cooperatively, the best means by which to attain these transcendent objectives.

Third, through collective action, sacrifice and heroism, we must integrate our efforts to achieve these purposes, or else face the alternative that we and our allies will perish from the earth as civilized peoples.

True, such sentiments have been voiced before; perhaps, indeed, they have been reiterated so often and in such too-lofty language that to many of us they have somehow lost their piercing and poignantly personal significance. Let us then again realize that democracy and justice are *not* just words to be used in speeches, for in this our everyday existence, they signify real and inestimable values such as your dignity and mine, your liberty and mine, the preservation of our families, our opportunities for education and self-betterment, our freedom of thought, action and religion, and a system of government that will preserve and develop these priceless advantages as long as Americans cherish them.

[1] Read before the American Dietetic Association, Detroit, October 19, 1942.

But now that we have been forced into this colossal life-struggle by our barbaric and ruthless enemies, how can we best organize ourselves to defend and preserve our way of life? Obviously, by two equally essential spheres of effort: first, by mobilizing our courage, strength and genius in total military war against our enemies abroad, and second, by utilizing the very same qualities at home in our contributions to war finance, to industry and to various essential aspects of civilian defense and civilian morale. It is with the latter especially that you and I are concerned this afternoon, since we, as specialists in interrelated fields of medical science, can here contribute most to the physical and mental well-being of our nation.

THE SPECIAL AND GENERAL DUTIES OF PROFESSIONAL WORKERS IN CIVILIAN DEFENSE

With regard to your contributions to the war effort as experts in nutrition I shall say little, since I anticipate that other speakers will deal with the innumerable services you can render in recommending adequate diets for war workers, in planning the nutritional care of children left in nursery homes by mothers drafted to industry, in advising the government as to what substitute foods may be utilized in the event of rationing and shortages, how to organize and operate traveling canteens for emergency use in bombed areas, and other such special fields of activity. However, as individuals who by virtue of your general cultural background, professional training, and social position have attained leadership in your groups and communities, you can influence not only the health and welfare but also the attitudes and the morale of the people with whom you come in contact. Let me then discuss with you some of the psychological principles of group morale—principles which you may already know by training or by intuition—but which, when reformulated in simple language, lose their aura of mystery, gain in clarity, and become capable of everyday application. For the sake of specificity, moreover, let us review these principles briefly under four simple rubrics: (1) the psychological aspects of group organization, (2) the avoidance of ill-advised propaganda, (3) the necessity for "morale hygiene" and (4) the control

of anxiety and demoralization in groups of people placed under stress or danger.

PSYCHOLOGICAL ASPECTS OF DEMOCRATIC GROUP ORGANIZATION

First of all, we must recognize that most Americans have been trained in highly individualistic traditions and in general resent what they deem to be unnecessary regimentation. Fortunately, however, once they know clearly what is needed in group effort—and especially let them agree that it *is* needed—they can be relied upon to offer their services and resources with full democratic spirit and spontaneity. This principle of democratic mobilization in emergency was, in fact, applied in organizing the Chicago Civilian Defense organization, and brought highly effective and gratifying results. Therefore let me advise you as to your first function as morale councillors: inform yourself of the multiple opportunities for duty in your district, municipal or state office of civilian defense, and then not only offer your own special services but induce your friends to volunteer theirs in jobs for which they are especially suited. Emphasize in this connection, however, that it is essential that every individual be fitted into an activity for which he is best qualified by physique, ability and temperament, as, for example, air raid wardens, nurses' aides, ambulance drivers, and so on. This, of course, will require adequate knowledge and good judgment on the part of morale councillors in guiding volunteers who seek advice as to choices of activity. Even more important, however, will be a frank self-evaluation by the volunteer as to his own capabilities, and a clear understanding and determination on his part that he will inform himself thoroughly of his job, that he will accept discipline, hard work and self-sacrifice and that he must resolve to be alert and responsible for the duration, *i.e.* after first enthusiasms have worn thin and when duties become onerous or even seem unnecessary. To summarize, care in civilian defense placement, thorough preparation for special duty, and individual responsibility and cooperation in the well-organized group effort are indispensable factors in creating and sustaining democratic group morale.

AVOIDANCE OF ILL-ADVISED ATTITUDES ON MORALE

Here let me submit—and I make this statement almost boastfully—that patriotic Americans, effectively organized and deeply engaged in the supreme task of saving themselves and world civilization, deserve to be protected from the usual types of oratory on how to keep up their spirits and determination. In fact, supercharged emotional harangues on patriotism and "morale" may do more harm than good, since people may begin to wonder if their leaders distrust them or are preparing them for some impending disaster. Certain types of exhortation that have at times been resorted to by psychologically misguided publicists should especially be avoided. To name a few:

> First, let us not, even in times of stress, keep reiterating the futile phrases, "Be calm," "Keep cool," and others of that ilk. Such spoken or written admonitions really calm nobody, but instead either encourage a dangerously false complacency or else actually increase the anxiety of the person or group addressed. The purport of our precept and example instead should be: We must know our individual jobs in the total war effort. We must drill and work at them together and be prepared for any emergency. Then shall we be firm in our purpose, self-reliant in our strength, and truly calm and confident.
>
> On the other hand, let us also not be gloomy prophets of doom and destruction and delight in drawing fantastic pictures of the horrors of civilian warfare: holocausts of bombs and fire, murderous gas attacks, the deliberate spread of disease, and so on. Exaggerated fears produced by such public forebodings stimulate only a few and demoralize many. Emphasize the need for absolute preparedness, but point to the fact that the British and Chinese have withstood total war for years and have come through stronger and more determined than ever.
>
> Again, we must not, as a civilized and cultured people, ourselves become firebrands of blind hate and revenge. Fanatic hatreds, I am glad to say, are strange to most American temperaments. Moreover, if encouraged, they will make us unnecessarily suspicious of patriotic Americans of foreign birth, and by fostering attitudes of intolerance and disintegration after the war, may defeat the very purposes for which we are fighting. Advocate instead a firm, intelligent resolve to abolish forever Nazi, Fascist and all other systems of tyranny and injustice, and so eventually make possible a secure, useful and happy life for us all. In truth, four-fifths of the earth's population is marshalled in the belief that all government is created to preserve the freedom and dignity of the individual, whereas only those that lead our enemies wish to constitute themselves into a barbaric state to which the whole world must be enslaved. It is these leaders and their dupes, not the remaining fifth of the earth's population, that must be destroyed for the good of all humanity.

PSYCHOLOGICAL DEFENSE AND "MORALE HYGIENE"

But while we are planning, working and fighting, we must also learn to defend ourselves against the perverted tricks of mass psychology that have been used by our enemies to disorganize and demoralize other countries and so make them easy victims of conquest and enslavement. Here, also, the more educated and discerning among us can provide valuable intellectual leadership for the less sophisticated and those already misguided. We know that during the last ten years the Nazis have forced many of the best psychologists remaining in Germany to give their services to an Institute for Psychological Warfare, the sole purpose of which is to prostitute the science of psychology and use it as a weapon to dupe, frighten or panic the enemies of Nazism into a state of impotent submission to military conquest. Fortunately, the psychological principles of this so-called "war of nerves" are also known to us, so that I can predict that, by propaganda and fifth column, our enemies are sure to attempt the following:

First, they will try to spread suspicions and hates among us in order to promote paralyzing distrusts of our government, of our leaders, of ourselves and even of our ideals. Every known device—subtle rumor, subversive propaganda, and even open treason masked as false "Americanism"—will be used by our enemies or their agents to set group against group, race against race, religion against religion, labor against management and even one generation against the other. With devilish cynicism and ingenuity our enemies will attempt to seek out and utilize every selfish motive, every prejudice and every hostility within us, and thereby implement with terrible effectiveness the ancient maxim: "Set your intended victims to fighting among themselves, and they are yours." But let us remember that the antidotes for this propaganda of paralyzing hate are relatively simple and in accord with the tenets of true democracy. For one, let us reinform ourselves about our government, our Constitution and the history of free peoples everywhere, and we'll find ourselves proud of *all* the races, creeds and sects that have made America great. And in the present, let us get really acquainted with our neighbors—whatever their origin, accent or belief—through meetings, rallies, discussion groups, interchurch functions or by whatever social means—and we will find our current suspicions and distrusts vanishing with our ignorance and prejudice. Then let us really apply our boasted democratic ideals, and battle intolerance and injustice wherever we find them. And with regard to our leaders, let us censure them when they make mistakes, and elect new ones whenever we like—that is our democratic privilege, though we must learn to use it wisely and well in wartime. But no foreign propaganda should make us distrust the men we ourselves have chosen, nor change our loyalty to them or to our ideals.

A second form of psychological attack that we can anticipate will be the spread of rumors and dark whisperings of our "hopeless weakness," of widespread sabotage and military disasters, of horrible weapons such as gas and bacterial warfare to be used against us, and so on. This psychology of terror has already taken many forms in the current war. A favorite method the Nazis used in England was to bomb a city with everything they had and then to spread the rumor that this was only a token of much worse to come. Other methods of frightening the populace have included the use of terror-inspiring "scream bombs," or motion pictures projected on clouds to create panic among the superstitious. Another technique has been to announce the capture of a city several days before its militarily inevitable fall; temporary denials by our allies then only served in retrospect to enhance the legend of the invincibility of German arms. The enemy will, of course, intensify every effort to spread discouragement and fatalistic convictions of defeat after every temporary set-back of our armed forces. Rumors and fear-ridden whisperings provide the enemy with powerful and relatively cheap weapons, since, as a psychological survey in Boston has recently shown, they are easily started by fifth-columnists and rapidly spread by foolish people who enjoy the empty satisfaction of pretending to be "in the know." Our methods of "morale hygiene" in defense against these forms of psychological warfare are once again simple:

Distrust unknown broadcasts and "authoritative reports" from unchecked sources. Challenge and silence the spreaders of misinformation by calling attention to their gullibility and the treasonable effects of their irresponsible talk. Your local FBI office will, of course, be glad to hear of persistent rumor-mongers and of known seditious activities, but in this connection, let me relay an official FBI caution to all patriots not to attempt to trace these activities by amateur detective work of their own, since it might seriously interfere with confidential investigations already in progress by government agencies.

Finally, we can also predict that when all other methods fail and our enemies begin to see their doom approaching, they will suddenly begin to bewail and deplore the destruction, bloodshed and misery of the war they themselves started, and will begin to proffer a false peace of compromise and appeasement. Let us then, despite our abhorrence of warfare, resolve never to forget that they will really want the peace for only one reason: to rearm at leisure so that they can attack us again while we are preoccupied in trying to clean up the horrible mess into which they deliberately plunged the world. There can be no peace with the present barbaric leaders of the Axis nations. In their psychological warfare against us, then, our enemies will try by every means in their power to divide us, to frighten us, or to deceive us into submission. In defense, we need only know all the cowardly tricks in their so-called "war of nerves" and refuse to be deluded.

PSYCHOLOGICAL PRINCIPLES OF CONTROL OF GROUP ANXIETY AND PANIC

Now that we are at war—and our military experts tell us that there are possibilities that even our inland cities will be bombed—we of the civilian front must also prepare ourselves psychologically to withstand the strains and dangers of actual military attack. Perhaps the first step is to admit frankly that we shall experience certain fears and flinchings when exposed to the actual dangers of total civilian warfare. It is reassuring to know that some degree of anxiety under stress is natural to everyone and is, within limits, actually beneficial insofar as it makes us physiologically more alert and efficient. Beyond that, there are only a few important psychological

precepts of action in time of emergency which may be outlined as follows:

If you have a specific defense duty to perform, join your organization immediately, in uniform or insignia if possible, and get busy on the job. In concerted, effective group effort there tends to develop in each participant an almost joyful feeling of belongingness and usefulness which quickly obliterates personal fears and anxieties.

If you have no immediately assigned duties, join your family or your accustomed group of friends in a prearranged shelter; whenever practicable, do not remain alone and do not expose yourself to unnecessary danger. Reassure those about you by your own bearing and self-confidence, and whenever possible induce them to join in organized group activities. Children are especially influenced by the example of their elders and will be little disturbed even by real danger unless the adults about them show evidences of exaggerated fear. However, if, in rare cases, anyone in your charge does become irrational and emotionally uncontrolled it is best to conduct him to a local casualty station for special care before he disturbs other members of the group.

When the emergency is over, do not hesitate to advise those about you in special need to seek aid from the various social agencies that are being set up by many government departments concerned with Civilian Defense. Extensive provisions are being made to furnish adequate protective services, provide free medical care, restore the food and water supply, repair public facilities, furnish clothing and other essentials in emergencies, reconstruct damaged homes, and even reimburse those whose earnings are temporarily suspended. If, on the other hand, your family and friends have suffered no personal or property damage, encourage them to resume their regular jobs and normal activities as soon as possible.

So much for the acute emergencies which may come. But the rules for the long, hard struggle ahead are even more important. First of all, the health of the population must be maintained, and here the members of this Association especially can use their professional training and personal influence to see to it that those in their care get a nutritious, balanced diet, sufficient exercise, and early medical attention when necessary. Monotony, over-sustained intensity of effort and fatigue also eventually impair morale, so that measured hours of work, varied tasks, sufficient rest, adequate recreations, and occasional brief vacations actually increase our productivity. Finally, let us not become so grim and grimed in the stress of it all that we forget perhaps our greatest stabilizer—a sense of humor.

Taste Appeal Correlated with Nutritive Value

Keeping cooked vegetables warm has been found to result in large losses Also, allowing vegetables to stand either at room temperature or in the refrigerator results in marked decreases in the vitamin C of most vegetables. Cooking in large quantities and holding vegetables warm are problems for the institution worker, although they need not be for the housewife. The occasional hotel and restaurant practice of removing vegetables from the heat before they are quite done and holding them in the refrigerator until ordered, then heating them quickly in small amounts as ordered, is, no doubt, more conducive to the retention of vitamin C and other attributes of quality than the practice of keeping large amounts warm during the entire serving period. . . . The data indicate with a reasonable degree of reliability the factors that decrease the vitamin C content and consequently, in the great majority of cases, the factors that decrease the quality and total nutritive value of vegetables. These factors should be considered in calculating dietary intake, for not many vegetables are eaten in the strictly fresh, raw state.—*Fenton, F.: Vitamin C Retention as a Criterion of Quality and Nutritive Value in Vegetables, J. Am. Dietet. A. 16: 524, 1940.*

The Nutrition of War Workers[1]

ROBERT S. GOODHART, M.D.

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THE character of this war has impressed upon us the fact that perhaps for the first time in history the responsibility for national defense is shared alike by every class in the community. This is a war of production; a war in which it is essential to keep the people strong and morale high so as to assure an adequate flow of weapons to the armed forces.

Unfortunately a great many workers upon whose production depends the outcome of battles in distant seas, islands, and continents are still inadequately fed. In too many instances no amount of education in nutrition would be of very much help, for conditions are such that it is almost impossible for the worker to obtain a good diet.

The National Nutrition Conference for Defense, called by the President, and held in Washington in May 1941, adopted a series of recommendations relating to the diet and nutrition of the defense worker. One of the most important of these recommendations was that the approval of all contracts calling for the construction or expansion of defense plants should include consideration of appropriate facilities for feeding the workers. Unfortunately this has never been implemented. It is still possible to build a plant in an area where practically no community eating facilities exist, without making proper arrangements for feeding the workers. The Conference also recommended that the families of low-income workers (in defense industries) should be included in the distribution of surplus supplies of protective foods, it emphasized the importance of nutritionally conditioning labor recruits, and it pointed to the need for controlled studies of diet and nutrition in their relationship to health, working capacity, incidence of accidents and absenteeism.

The Nutrition Division of the Office of Defense Health and Welfare Services has set up an organization to aid state and local nutrition committees and voluntary bodies in tackling the problem throughout the country. The technical advisor on industrial nutrition in the Washington office works through this organization created by the Office of Defense Health and Welfare Services to implement the National Nutrition Program. Assistants to the regional representatives of the Nutrition Division are being appointed. They will concern themselves entirely with the industrial feeding problem.

In the meantime industry itself has taken a prominent part in the work. Several industries have undertaken carefully worked out programs of education in nutrition, for both the worker and the worker's family. It is expected that state and local nutrition committees will avail themselves of the opportunities and facilities placed at their disposal by industrial concerns providing educational programs and material agreeing with the policies of the Office of Defense Health and Welfare Services. One of the functions of the regional representatives of the Nutrition Division is to become conversant with all such programs and to keep state nutrition committees informed of developments in this field.

THE EVIDENCE OF INADEQUATE NUTRITION

When the Committee on Nutrition in Industry, of the Food and Nutrition Board, National Research Council, started its work, little information was available concerning the diets of industrial workers and little or nothing was known of their nutritional status. The Committee was forced to rely upon indirect evidence and the advice of experts with practical experience. It was known that many war plants were expanding rapidly and that many new plants were being built, some in sparsely settled areas with inadequate facilities for housing, food, and medical care. New workers were being employed and these came in large part from age groups and classes not suitable for the armed forces. Many had been unemployed, and the change from light or no work to fairly long hours of concentrated toil, with changing shifts and unaccustomed types of work, must have imposed a heavy strain upon them.

Some indication of the nutritional status of these new workers is furnished in an investigation of the nutritional status of a WPA group in New York City (1). This group was engaged in clerical, messenger, and laboratory work. Over 26 per cent of 165 adults of both sexes were found to be deficient in

[1] Presented before the American Dietetic Association, Detroit, October 19, 1942.

blood-plasma ascorbic acid with less than 0.20 mg. per cent. Over 40 per cent had less than 0.40, and over 55 per cent had less than 0.60 mg. per cent. As for the incidence of anemias, 7.6 per cent of the males had less than 14 gm. hemoglobin per 100 cc. blood, and 6.8 per cent of the females had less than 12 gm., the minimum limits of the normal range for males and females, respectively.

The most frequently encountered of all the deficiencies was avitaminosis A. Marked conjunctival changes were found in the eyes of 65 of 143 persons examined, while only one of the entire group was classified as completely normal. In a number of the cases the conjunctival changes have disappeared after prolonged treatment with vitamin A, whereas they are still as marked as ever in a control group.

NUTRITIONAL CONDITIONING OF PROSPECTIVE WAR WORKERS

The Committee recommended (1) that steps be taken to condition nutritionally those classes of the population who were likely to become workers in war plants. In adopting this recommendation the Committee had in mind the results obtained in Great Britain when volunteers who had been rejected by the Army mainly for underweight, debility and deficient chest measurement, were conditioned at the Physical Development Depot at Canterbury. For six months nearly a thousand rejectees were built up at this depot. Measures for improving the health of the unsuccessful recruits included: optimum diet; sufficient and sound sleep; hard physical work; and healthy recreation. Milk and fruit were added to the presumably adequate Army ration. In addition to four regular meals, a snack was served at 10:30 a.m. (milk or soup and fruit) and at "tea" (tea, biscuits and barley sugar) in the afternoon.

As a result of this treatment, 87 per cent of 834 men were accepted and passed into the Army. Only 5 per cent were afterwards discharged on grounds of medical defects. This is certainly an economical and simple method of conserving badly needed manpower.

The Committee also based its recommendations, in part, on the work of Williams, Wilder, and their coworkers, who showed that a diet sufficiently rich in thiamin to prevent the development of obvious deficiency disease is not necessarily adequate for the best nutritional state of the patient. Larger amounts of this vitamin in the diet increased the alertness and attentiveness of experimental subjects and led to more satisfactory performance on an exercising device; *i.e.* increased working capacity. Diets deficient in thiamin gave rise to clumsiness leading to numerous small accidents. A lack of thiamin is one of the commonest deficiencies in the American diet.

RESULTS OF A DIETARY SURVEY AMONG AIRCRAFT WORKERS IN SOUTHERN CALIFORNIA

More precise data on workers' diets were furnished by a study of the diets of about 1100 workers in southern California (2). From weekly diet records, over 55 per cent of the diets were classified as poor in relation to content of green or yellow vegetables; nearly half were deficient in citrus fruit or tomatoes, about a third were poor in milk, and a fifth in eggs. Almost all were satisfactory in the amount of lean meat consumed. Only 2 per cent contained satisfactory amounts of food representative of all the five food groups. In all, 87 per cent definitely failed to meet the recommendations of the Food and Nutrition Board of the National Research Council. A total of 250 complete 2-day diet records were analyzed for their nutritive content. The percentages of diets in which the amounts of specific nutrients were less than two-thirds of the recommended daily allowances were: protein, 0.8 per cent; iron, 4.0 per cent; niacin, 7.2 per cent; thiamin, 14 per cent; vitamin A, 14.8 per cent; calcium, 24.8 per cent; riboflavin, 43.2 per cent; ascorbic acid, 46.0 per cent. Of the 250 diets analyzed, 71.6 per cent provided but two-thirds of the recommended daily allowance in one or more respects. It is surprising that 40 per cent of the men reported diets which furnished less than 140 per cent of their basic metabolic needs, as this level of caloric intake has been regarded as insufficient for men engaged in work involving physical activity.

There can be little doubt but that, if the losses of nutrients in processing, storage, cooking and standing had been calculated for these diets, the percentage deficient in certain essential food factors, particularly vitamin A, thiamin and ascorbic acid, would have been much higher. Recent studies indicate that such losses may be very great in practice—losses in thiamin and ascorbic acid being as high as 90 per cent in some foods.

POSSIBLE SOLUTIONS TO THE PROBLEM

The evidence that has been uncovered in these studies, few and incomplete as they are, cannot be glossed over. The war worker, on whom we depend for production of the tools of war, is not adequately fed by modern standards. Under these conditions he cannot enjoy optimum health, and his output must suffer accordingly.

The proper feeding of industrial workers is a complicated problem, the solution of which requires the cooperation of industry, labor, the community and the government. There are the problems of provision of foodstuffs; of the distribution, preparation and service of foods; of food habits; of adequate housing, transportation, and feeding facilities; and there is the problem of the relation of cost to purchasing power.

Education must play a role of prime importance

in any effort to improve the nutritional status of our population. To be successful, however, appropriate educational procedures must be directed not only to the consumer but also to all groups concerned with the production, distribution, preparation and service of foodstuffs. They must be based upon sound information concerning the practical difficulties apt to be encountered and must be adapted to the situations with which they are intended to deal.

The need for an intensely practical approach to the nutrition problem is perhaps most apparent in industrial and other mass feeding situations. There is a growing demand for well-trained dietitians and nutritionists experienced in this field.

With regard to the use of food concentrates and synthetic vitamins in industrial feeding, the tendency of some manufacturers to make these substances available to their employees, without ever having made even a cursory examination of their feeding conditions and requirements, and without any attempt to remedy the deficiencies in the food situation, is not to be commended. We all know that an adequate diet of natural foodstuffs is essential for good nutrition and must be the goal of any well-conceived nutrition program. However, those of us who have worked with nutritional deficiency diseases or who have had mass feeding experience know that situations exist where it is not advisable to depend upon the available supply of what are commonly considered "natural foodstuffs" for adequate amounts of all the essential food factors. Where there exists an excessive loss of salts or vitamins from the body, where energy output and therefore metabolic requirements for these substances are extraordinarily high, or where therapeutic amounts are indicated, the need for the administration of particular vitamins or salts in quantities greater than can be obtained in "natural foods" may be present. Such needs should be defined by the physician.

Again, where the available supply of foodstuffs cannot be depended upon to satisfy even the average requirements for certain essential food factors, either because of deficiencies in supply or due to irremediable losses in the storage, transportation or preparation of foodstuffs, indications for the use of food concentrates or synthetic vitamins may be present. Such conditions should be defined by the dietitian or by a physician trained in nutrition.

In the prophylaxis of vitamin deficiency diseases, foods naturally rich in vitamins, such as yeast, liver, certain fish liver oils and wheat germ, are to be considered preferable to the synthetic vitamins. Whereever possible such foods should also be incorporated in the therapy of nutritional diseases, along with sufficient amounts of the appropriate synthetic vitamins.

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Food Rationing for Diabetic Patients in Great Britain

Early in the war the government appointed a committee of experts to consider what modification of the rationing system would be necessary for invalids, and particularly for diabetic patients. Those not on insulin could not, like normal persons, substitute more carbohydrate foods, bread, potatoes and the like for the restricted protein and fat. Patients on insulin were in a better position because they could increase the dosage, if necessary, to compensate for less protein and fat. However, no distinction was made between the two groups, and it was decided that all diabetic patients by giving up their sugar could obtain extra protein, in the form of meat, and fat rations on producing a doctor's certificate. Subsequently extra cheese (12 ounces a week, later increased to 16 ounces) was granted and extra milk (1 pint daily) could be prescribed. Two extra fat rations of 6 ounces a week of butter or margarine are allowed, making a weekly total of 18 ounces of butter or margarine and 2 ounces of cooking fat. The protein ration scheme amounts to 40 ounces of meat, 12 ounces of cheese, 4 ounces of bacon and up to 7 pints of milk weekly. In addition, there are occasional eggs, fish and poultry. Thus the animal protein allowance is very liberal.

Diabetic patients threatened with ketosis suffer from nausea and vomiting and may be unable to take their usual diet. They must take carbohydrate to balance their insulin. As sugar and sugared drinks are usually the best form in which to take carbohydrate, an emergency supply can be obtained on presenting a medical certificate at the local food office. One and one-half pounds is allowed at once in exchange for the meat, bacon, fat and cheese coupons for the next week.—*Foreign Letters, J.A.M.A., 120: 1240, 1942.*

A Food Cost Control System in a Dietary Department[1]

ELLA M. ECK
Chief Dietitian, University of Chicago Clinics, Chicago

I HAVE been asked to describe our method of food cost accounting, which when instituted was quite different from the usual hospital method. More hospitals are now operating with a central kitchen, which means that cooked foods must be charged out to the various units if the cost of food in each of those units is to be determined. The establishment of pay cafeterias for the personnel demands accurate knowledge of the cost of food in order to calculate the selling price. So today there is need for a system which will give accurate costs of food in the various units. We now realize, too, that it is necessary to know costs if they are to be controlled. Our dietary departments are on a more businesslike basis, with personnel provided to assist in the clerical work necessary for determining costs.

The system of food cost accounting used in this institution is similar to the hotel system but has been gradually adapted, through more than ten years of experience, to fit this particular situation. All food, except that prepared in the special diet kitchen, is produced in the main kitchen, which serves the patients of three hospitals, and all the personnel in two cafeterias. It is essential that the cost of the food be known for each hospital and for each of the cafeterias, and therefore it is necessary to charge the cooked food issued from the main kitchen to each account.

One hospital cares for adults; another, children's medical cases; and the third, children's orthopedic cases, including many older children with a more nearly normal diet than in the medical unit. This means that the varying factors of age, size, activity, and proportion of private patients to ward patients must be considered. It is not possible, therefore, to divide the cost among the hospitals on the basis of number of patients served in each unit. The menus are coordinated as much as possible but because of the varying factors, the food cost of the hospital for adults is higher than that of the crippled children's unit, which in turn is greater than that of the pediatric unit.

The usual device of standardized recipes is, of course, used for costing mixtures of food. The recipes are based on the number of portions most commonly served and the cooks figure from this standard quantity the amount needed for the number of portions ordered each day. There is very little left-over food from those units where the number to be served is known in advance. All yields of recipes which can be measured in volume are stated in quarts. The food for patients is ordered by the portion and issued according to a conversion table in the kitchen, which states the number of servings per quart of each type of food. The food for the cafeteria is issued and charged by the quart.

If an important item in a recipe is fluctuating in price, as has been the case in the last few months, the cost of that item is checked each time the recipe is used—for instance, the meat in a stew. On the daily store's requisition, the cost accountant is given the current prices of foods, and re-prices recipes in keeping with market changes. It is never safe in these days to use the prices on last month's inventory, unless it is known that a month's supply is on hand to be used before a new purchase is made.

For meats and vegetables to which little except seasoning is added, a different method is used. Meats are weighed before they go into the oven and after they come out. Any boning or trimming shrinkage is also recorded, as well as the number of cooked pounds sent to each unit and the unused portion left in the kitchen. With these data it is possible to calculate the exact cost of the meat sent to each unit. Any material returned unused to the kitchen is credited back if usable and charged out again when re-ordered.

The same method of pricing is used for vegetables. Here the variation in yield may be even greater than in meat and therefore the error greater if an average yield is used. The amount used in bushels, crates, etc., with the weight, if pertinent, and the cooked yield, is recorded. Thus an accurate cost of the finished product is obtained.

PERSONNEL REQUIRED AND THEIR DUTIES

It may seem that this system demands a large personnel, which is not the case since those who are

[1] Presented before the American Dietetic Association, Detroit, October 22, 1942.

preparing and handling the food record the necessary data as they work. Therefore it really does not take a great deal of any one person's time except that of the cost accountant who calculates the cost on the basis of collected data. Even the cost accountant does not spend her full time on costing the food.

The dietitian in charge of the main kitchen is responsible for checking the recorded data for accuracy and completeness. While this takes time, it is an excellent means of checking on the use of food supplies and serves in itself as a means of food control. The fact that an accounting must be made serves to make the workers more careful of food supplies and discourages waste and pilfering. The discovery of a poor yield of any product brings to light discrepancies in quality, which may not have been apparent in the routine check in the receiving room. This system is good training for any dietitian who may feel that her duties are ended when she makes the menus and orders the food in the quantity the cook has designated. I do not believe that any student trained under the system I have described will fail to keep herself fully informed regarding her food supply and its proper use.

The cafeteria manager prices the cooked food issued from the main kitchen to the cafeterias; this procedure keeps her informed of the current costs of food which, of course, determine the prices at which the food is sold. The costing of this food could, as a matter of fact, be done by the cost accountant, but the manager feels she is more closely in touch with the situation and can write menus more intelligently if she does it herself.

The cost accountant tabulates all food issued, on a sheet which includes all issues from the food store, the main kitchen, and the diet kitchen to all units. These figures, added together for any one unit, give the food cost for that account. It is possible during the month to check on the food cost, and all costs are totalled and the census recorded for each week for this purpose. This provides information during the month instead of waiting until the end of the month.

At the close of the month inventories are taken in the food store, the main kitchen, the cafeteria, and the diet kitchen, and the totals are added to the food cost sheet, which also has the inventories of the previous month. Credits and charges between the various units of the department are also tabulated. The completed food cost sheet and the supporting data are sent to the business office to be incorporated into the formal monthly report of all expenditures of the department. Meanwhile, the priced store's requisitions for food have been sent to the business office from time to time as completed during the month. The priced kitchen requisitions and all priced inventories are then sent to the office with the tabulation sheet. Since the invoices for food have cleared through the business office during the month, they then have the store's inventory at the beginning and end of the month, and the purchases and issues made during the month. From these data the food cost of each account is calculated.

The cost of food for patients is figured on the usual hospital method of cost per patient per day. In the cafeterias the commercial method of figuring what per cent the food cost is of the total sales or of the sales dollar is used and an effort is made to compare our performance with good practice in commercial restaurants of the same type.

FACTORS IMPORTANT FOR EFFICIENT OPERATION OF THE SYSTEM

There are many difficulties which must be surmounted in establishing a system of this kind. First of all, one must have intelligent employees, particularly cooks who understand what data are needed and are conscientious about recording these accurately. The fact that all of our cooks have been with us for at least eight years and the chief cook for thirteen years has been a factor in the successful operation of the system. However, there must be supervision and checking by the dietitian to ensure complete and accurate data at all times.

The second most important factor is a conscientious, intelligent food cost accountant. This position does not necessarily call for a degree in accounting, although one of our best accountants had a degree from the Business School of the University. The salary is not large enough to hold a person with such training very long. It is possible to teach a young woman with experience in accounting to price recipes and cost food and that is our usual procedure. In the past we were fortunate in securing one young woman who had done work on food costing in a hotel.

Our present accountant is a young woman with home economics training and experience in a produce house, all of which provide excellent background and in spite of a lack of training as an accountant, she is doing a very nice job.

The present fluctuating market makes it difficult to cost food accurately, since recipes must be repriced frequently to keep abreast of the price changes. This very situation, however, emphasizes the need for cost accounting in food since we can go deeply "in the red" without being aware of it unless we are checking constantly on costs. The disappearance of many common items of food from the market is making it necessary to find substitutes or new ways of using other foods to secure variety. The rationing of sugar has forced us to discontinue many of our favorite recipes or make substitutions for the sugar. This means pricing new recipes and re-pricing old ones. Only by keeping a constant check on our costs can we hope to have any control under these circumstances.

One important factor in food cost control is the pricing of menus before they are served. After making the weekly menu, the accountant costs it

according to the latest prices. It is then checked for items which are too expensive and the average daily cost is estimated. Items such as fresh fruit or vegetables which may fluctuate widely, are typed in with a question mark which means that the portion cost is to be figured on the date of ordering in order to ensure that the price is in line. If the item proves to be too expensive at that time, a substitution is then made.

There must, of course, be a close coordination between the portions as estimated and as served, or the advance calculations will be useless. Employees must be trained to get the full yield from each item on the menu when it is served. Their performance in this regard must not be taken for granted but must be checked and supervised. A difference of a serving or two on a quart of soup, sauce, vegetable or a pound of cooked meat makes a great deal of difference in the final food cost. The use of ladles and dippers of standard sizes aids materially in obtaining the correct yield. Sample portions of the size desired help the employees in estimating portions of meat or other food not adapted to standard measures. (An excellent article by Margaret A. Byrnes of New York Hospital on this phase of cost control appeared in this JOURNAL for March 1941.)

While there are many simpler methods of cost accounting which are applicable in less complicated situations, we feel that for our own institution the method described above enables us to maintain control of food cost satisfactorily.

Food in Britain

The one lesson that I think we have learned as a result of our wartime experience in the food trades is that sacrifices and inconveniences will be willingly accepted, and indeed welcomed, if they are shared in equally alike and if they can be shown to be necessary to win the war. The way to get those sacrifices accepted and these drastic regulations and restrictions properly observed is for the government and industry to meet together and understand each other's difficulties. If that is done, then it is possible for both sides to come to a common sense arrangement based upon mutual understanding and good will.

You may ask how the restaurants are getting along under rationing. We have not yet come to the final resort of requiring customers to surrender coupons when they take a meal in a restaurant. We hope we never shall have to do so. But we do have to ration the restaurants themselves and they get their allowances, not on the basis of previous usage, but on the per meal basis.

Recently it has been necessary to impose a ceiling price that may be charged for a meal even at the most expensive restaurant. The maximum price for the food served is a dollar. For a very limited number of restaurants an extra house charge is allowed by order, amounting in the case of about half a dozen to as much as another $1.25.

The object of the government has been to provide sufficient good food, and of that there has been no question. On the whole the public's health and nutrition is as good or better, on the average, than in peacetime, but it has had to set its face against any fancy foods or "foods that represent temptation to idle eating." In this policy it has had the wholehearted backing and support of the British restaurant industry because restaurateurs recognize that that is their chief contribution to winning the war, to help the government to release shipping, to release manpower and fuel for war purposes.

I begin to see indications of similar developments here. The government and industry are getting together and industry is asking questions as to how they are going to carry on. One problem, which is the bottle-neck in winning the war, which concerns you as well as us, I suppose, is manpower. That has been the constant trouble of the food trades in Britain, and the restaurant and catering industry in particular. It may interest you to know that the man and womanpower employed per 1000 meals in Britain is now less than half what it was in peacetime. The average for wartime Britain is less than 5 persons per 1000 meals served.

This is explained by the fact that we have very little variety in our restaurant meals. The picture you get even in the best restaurant is no bananas, no grapefruit, no oranges, no lemons, no fresh eggs, one pat of butter the size and thickness of a quarter, no fresh milk served in glasses, no cream or ice cream, little or no salad dressing. Steak at Simpson's, if you get there in time, is about the size of a dollar bill. Sausages and meat pies are the same old food, but by regulation they must contain only 30 per cent of meat. No white bread is allowed, but there is an abundance of good, sound wholemeal bread, plenty of potatoes, turnips, greens, and, of course, English cabbage. The chief luxuries which we still owe to Providence and our island position are oysters and salmon in season.

You may ask how far are these regulations observed? We have all heard a lot about the black market. I would like to say that the regulations are observed far more than anyone could possibly have expected. The reasons, I think, are threefold.

First, there is enough food to go around so long as it is fairly shared. Second, public opinion is dead against any chiseling on food rations, breach of food regulations, in a way that public opinion would not have been if we had attempted such drastic regulations in peacetime or if we had attempted prohibition. Of course, there are black sheep in all walks of life; less, I think, on the whole, in the catering industry than in many others.

Last, the policy of the Ministry of Food has been to invite the associations of the food trades, including the hotel and restaurant industry, to assume the responsibility of policing their own members. We have found no more effective way of getting regulations observed once they are generally accepted as necessary than to get the industry itself to help in the policing of these. You don't deal with black markets and black sheep simply by making laws and orders and prosecuting, of course. You have to rely on the public opinion and professional ethics of the industry and trade concerned to see that the regulations are carried out.—*E. M. H. Lloyd, in an address before the National Restaurant Association, Chicago, October, 1942.*

Food Cost Accounting[1]

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FOOD cost accounting is the accumulation of the value of expenses, both labor and commodity, to be used periodically—daily, monthly, yearly—in measuring or recording total and unit costs in the dietary department. Food cost accounting, no matter how accurate, does not *control* food costs. It is only a measure in dollars and cents of expenditures in the dietary department. Figures resulting from food cost accounting have no value in themselves, but only as considered in relationship to one and all three other factors, namely: changing food prices, the grade of service being rendered, and the efficiency of the dietary department.

A comparison of food cost accounts month by month, year by year, is of great value in measuring the control of food costs, but only if it is fully understood that variations in these other factors must be properly evaluated. Food cost accounting and food cost control seem to be ever with us. No system of food cost accounting will prevent costs from changing, as prices and grade of service vary from day to day or year to year.

IMPORTANCE OF HOSPITAL COST ACCOUNTING

Bearing these qualifications in mind it is nevertheless true that cost accounting in the dietary department is of more importance to the dietitian and the administrator than to any other division or department of the hospital. This is true for two reasons: First, it is practical to accumulate the cost in the dietary department as a separate unit. Dietary costs are easier to determine than the costs of most other hospital departments. An interchange of employees or inadequate storeroom control may prevent the proper allocation of expenses in many hospital departments. However, no matter how simple the hospital accounting records may be, it is always readily possible to accumulate the cost of raw food, and little more difficult to accumulate the cost of employees working in the dietary department.

Dietary costs are easy to secure for a second reason: Cost accounting implies a unit of service which can be divided into total cost to arrive at a unit cost. It implies that all units of service (in food cost accounting, the meal) are approximately the same, therefore it can be assumed that the unit cost is more or less accurate for each unit of service. This is true in the dietary department, more so than in any other hospital department. In other words, with fair ease we have an opportunity to arrive at total costs, the number of meals served, and a per meal cost.

This ease of accounting in the dietary department in a small hospital is important to the dietitian who often finds that her food costs are being compared with food costs in other institutions. Often these comparisons are reasonably accurate and may well be accepted by the administration as indicative of further obligations on the part of the dietitian—obligations which call for greater attention to food cost accounting, and increased efficiency in the operation of the dietary department as this is measured financially.

Since food cost accounting is important to the dietitian, both in assisting her in the control of food costs, and because it will be used in measuring her performance, it is imperative in the first place that she have a full understanding of the methods of food cost accounting, both as to general method, and particularly of the system in her own institution.

THE METHOD OF ACCUMULATING COST DATA

The accountant, like those of many other professional groups, has established a vocabulary which to the uninitiated is forbidding. We hear of balance sheets, profit and loss, surplus adjustments, and unexpired assets. Accounting can begin to have a mystical aspect confusing to the layman. It is a mistake to consider that accounting is simple. There are complicated procedures in properly preparing a balance sheet and a profit and loss statement. However, food cost accounting is not complicated; it is a very small segment of accounting procedures. It is simple for anyone to understand, and the dietitian must understand it well.

Basically, food cost accounting involves accumulating for a definite period the cost of materials consumed in that period; in other words, the food, labor and supplies used. If the department makes purchases each day for food consumed that day, the sum total of the daily bills for each month will comprise

[1] Presented before the American Dietetic Association, Detroit, October 22, 1942.

the monthly cost of food used. However, under most conditions in which food is purchased in quantity, it is necessary to establish an inventory of food and supplies at the beginning of the accounting period, usually one month; to add to that inventory all purchases during the month, and subtract the value of the inventory remaining at the end of the month. In a large institution this may require considerable clerical work. In any institution, however, it involves having the inventory stored under control so that it may be priced at the beginning and the end of the period, a procedure which is not necessarily complicated.

The cost of labor, as a rule, is even more simple to calculate than the cost of food. Employees are normally paid in such a fashion that one or two payrolls cover the period for which costs are being accumulated. Many hospitals pay on a monthly basis, and the sum of the amount paid dietary employees for the month represents labor cost.

Since the sum of raw food costs and labor costs per meal is determined by meals served, the counting of meals served becomes an important function. This procedure varies widely. However, due to an understanding of its importance on the part of dietitians, the calculation of total meals served is increasingly more accurate. Certainly meals served should be ju t that, the number of meals served. It should not be three times the daily census plus the number of meals to which employees are entitled. Unfortunately the meal count has many times been estimated in that manner. Accurate unit food costs, that is, per meal costs, no matter how carefully expenses are accumulated, cannot be determined unless the meal count is accurate.

Dividing accumulated raw food costs and accumulated labor, and possibly a supply item for other than raw food and labor costs, by meals served, gives a raw food cost, a labor cost, a supply cost, and a total served meal cost which, compared month by month, begins to have value to the dietitian.

In my mind the important factor for the dietitian to remember is the simpleness of cost accounting procedures. I would recommend that no dietitian depend on others to establish this system until she herself has a clear understanding of the clerical aspects of the system. Believe me, as one who has had this responsibility, simple clerical errors in accumulating the cost under the procedure here outlined can widely affect estimated meal costs. Accurate or inaccurate, such costs will be used in judging the dietitian's performance. Therefore, whether food cost accounting is in the dietary department or in another hospital department, it is necessary to understand the clerical system used and to insist that it be accurate.

VARIABLES TO BE CONSIDERED

The dietitian who is certain of the accuracy of the meal cost in her own department, must then be sure that in the use of this both she and the administration understand the other variables which must be considered with food cost figures. The first of these variables is changing food prices. As an administrator, I try always to measure food price changes. Unit food costs at the end of any given month should not be considered as of great importance until the figures published by the Bureau of Labor of the United States Government are available for that month so that changes in the raw food cost in the hospital can be compared with changes in wholesale food prices. No dietitian should be expected to maintain the same per meal cost for raw food, and to maintain the same service to patients and personnel in the face of a rising food price market—*it cannot be done*. The administration must decide in such instances whether the food grade shall be reduced, or the total cost increased. It is an administrative decision, but it is one which the dietitian should understand and be in a position to request of those in authority. It may be that the financial condition of the hospital requires a reduction in food costs, even at the expense of a reduction in the grade of dietary service. However, since service—both therapeutic and day-to-day satisfaction of the appetite of patients and personnel—is the primary aim of the dietary department, the grade or level of such service is of far more importance than food cost accounting. Reduction in grade should not be arbitrarily made simply because prices rise. The emphasis must be in the right place. Any dietitian who does not regularly compare raw food cost with wholesale food prices, in my opinion, is working under the most unfavorable circumstances.

Food cost accounting alone does not measure the service rendered by the dietitian. Let us eliminate the variable of changing food and labor prices, and assume a stable market. From the accounting records the dietitian learns that food costs month by month are equal. However, these food costs are still no measure of the service rendered by the dietary department. In fact, there is no absolute measure by which dietary service can be graded. We may say to personnel, "Do you like your meals?" and some will say, "Yes," and some, "No." We may go to members of the house staff who have worked in several hospitals, and after a good steak hear them say that the meals are better than in any other hospital. We may have few complaints from patients, yet having evaluated all of the complaints and commendations within a given institution we still have no exact measure of food service. As a hospital administrator I know of no method other than personal consumption and assimilation, both of food and

complaints, by which to measure the merit of a given dietary service. Success or failure ultimately depends on the ability of the dietitian, and to be successful she must have adequate funds. As a hospital administrator, I endeavor to give her adequate funds to meet price and salary changes necessary to maintain the level of service compatible with the finances of the individual hospital. From the dietitian's standpoint it is important that she understand, and the administrator likewise, that food cost accounting alone has little bearing on service to patients, and is not in any sense a measure of that service.

Even the efficiency of the dietitian cannot be fully measured by cost accounting because of the other variables mentioned—food price changes and the grade of service to patients. In the following hypothetical illustration food costs would measure efficiency. For instance, if we assume that the same dietitian operates two hospitals of the same size, with the same number of personnel, the same menus, and there is variation in costs, we may then assume that the department operated at a lower cost, granted the service to patients and personnel in both departments is equal in merit, reflects the greatest economy in operation and that hospital "A" with the higher cost, has been less efficient than hospital "B." Perhaps the personnel of hospital B has been less prone to dishbreaking, more careful in ordering the proper amount of food, in the use of leftovers, in the planning of the preparation of food in order that there may be no spoilage, in avoiding too large servings to patients, or in some or all of the hundred and one ways that increase the efficiency of the dietary department. The higher cost in hypothetical hospital "A" as compared to hospital "B" might be used by the administrator of the former in urging the dietitian toward greater efficiency, better management, more economy. However, the picture is never so sharply drawn and food cost changes may be due to changes in price as well as grade of service or degree of efficiency.

Hospital food cost accounting, then, is not the final answer. There are three factors to be borne in mind by the dietitian and the administrator in controlling food cost by the use of food cost accounting. First, each must understand the system and be sure of its accuracy; and, second, each must understand that those figures—the food costs, the per meal cost for raw food, labor and supplies, do not measure the variables of changing prices and salaries; do not measure the grade of service; and do not measure the efficiency of the dietitian. Those are variables which must be evaluated by experience and judgment before meal cost can be used as the basis for decisions controlling the operation of the dietary department.

Inspiration

Women of the Canteen Corps have a special interest in the family of Mrs. Walter Clay, Matagorda Negro.

The Red Cross women were at work in their Matagorda canteen on a morning soon after the hurricane. In dashes someone, saying Mrs. Clay was about to become a mother.

The canteen workers hurriedly found transportation for Mrs. Clay, sent her to a Bay City hospital. The new offspring turned out to be twins, a boy and a girl. They were named Canteen and Canteena.—*as quoted from the Red Cross Courier in Tonics and Sedatives, J. A. M. A., November 28, 1942.*

Controlling Food Cost Through Menu Planning[1]

GRACE E. SMITH
The Grace E. Smith Company, Toledo, Ohio

BEFORE considering the subject of menu planning would it not be wise to consider present and future prospects with regard to food supplies? At the American Meat Packers Institute on October 5, I heard Secretary of Agriculture Wickard say the meats available for civilian use would be veal, lamb, poultry and plenty of hearts, kidneys, liver, sweetbreads, and ox tails. Some beef and pork would also be available but not in sufficient quantities to use on our menus as often as we would like.

We all know that fish is scarce because of the shortage of boats and men. Salmon and tuna are practically nonexistent. Canned green beans, tomatoes, tomato juice, tomato purée, peas, and asparagus will be scarce.

In the cantonments all over the United States the government is now using frozen vegetables. Even though the pack is larger this year, there will be less on the market.

A new law recently passed prohibits packers of canned soups from using canned vegetables in their products. This will mean a new drain on the fresh and frozen vegetables.

Shortage of cars will probably curtail shipment of bulky vegetables from the West Coast and South. Likely to be affected by this order are head lettuce, eggplant, cauliflower, and spinach because they require too much shipping space for nutritive value obtained.

Ceiling prices recently placed on oranges, grapefruit, and lemons may cut down the supply for eastern consumption if the receiver finds himself caught with a too high floor for his low ceiling.

Apples should be plentiful as the crop is good, although some varieties may be hard to obtain.

Bananas, in addition to being scarce, are also an item under ceiling restrictions which will make them almost impossible to secure in many localities.

Figs will be spotty, but probably available from time to time, although scarce. Fresh dates and both red and white grapes should come through if shipping space permits. The 1942 pack of dried or evaporated fruits has been frozen at the source and a very limited quantity of such items as currants, prunes, raisins, citron, apricots, and evaporated apples will be released for civilian use as large quantities are required for the armed forces as well as Lend-Lease.

The supply of dairy products is less than in 1941. Fresh milk and cream will be scarce in some communities and whipping cream will probably be removed from the market entirely. Butter will be rationed. Cheese, which has been plentiful, will become increasingly scarce as more will be shipped abroad and greater quantities used in this country as a substitute for meat.

Tea is already on a 50 per cent restriction, cocoa and chocolate on 60 per cent, and these items will disappear as almost no tea is coming in and only 25 per cent of the chocolate and cocoa.

The 1942 pack of fruits in #10 cans is practically off the market because the quota required by the government equals or exceeds the entire amount normally packed in #10 cans. A good example is pineapple, of which only 24 per cent is packed in larger tins and the government requirements will take 34 per cent. The government is taking *all* extra fancy, fancy, and choice dessert fruits as well as the best pie fruits. This will leave only standard grades for civilians.

SIMPLIFYING YOUR MENUS

With this bird's-eye view of the commodities available as we see it in October 1942, let us now see how we can plan our menus so that they will be attractive and nutritious and not exceed the food budget. If you want to control your food cost the place to start is in your menu planning.

What you serve is bound to affect your food cost. Many of you know families who set a good table and still are able to keep within a reasonable food budget. Why? Because their meals are carefully planned and costs computed *before* the food is purchased. But too many are like a young bride who frantically wrote her mother, "What can I cook besides steak and chops? We are spending too much on food!"

In order to control your food cost I would suggest that you

[1] Presented before the American Dietetic Association, Detroit, October 22, 1942

(1) Know what your market affords and the price.
(2) Standardize your recipes and portions so that you will know your cost per unit of sale.
(3) Decide how many dishes you will carry on the menu. Now is a good time to cut down on your variety.
(4) Have a complete list of all the items you serve as main dishes and star your long-profit items. Be sure that one or two of these low-cost dishes are on every menu.
(5) Always have one meat substitute and one meat extender, since meat is your most expensive dish and will soon be rationed anyway.
(6) Have a good variety of fresh vegetables and feature a vegetable plate daily.

Many hospitals, institutions and restaurants are losing a golden opportunity to lower food costs by not serving more meat substitutes. Those who are sick and inactive would often enjoy a lighter and daintier meal. Jaded appetites can be tempted by the unusual and often inexpensive dishes. Check your trays and see whether all the food has been eaten. Visit the dishwashing department and see what has been left on the plates.

We must watch to see that no food is wasted when most of the world is in such dire need of it. Today waste is sabotage—we must eliminate it. Waste can also be reduced by the simplification of our menus. Do not carry items on which there is a small turnover. Simpler menus will make the training of new and unskilled employees easier. The first menu items to be eliminated should be the more elaborate ones.

While we hear of customers already complaining of not enough variety, one restaurant consultant found upon investigation of these complaints that they were not really motivated by lack of variety on a given day's menu, but were caused rather by lack of variety from day to day—poorly balanced menus, items appearing on the same day of each week.

If fewer items are prepared the ability to concentrate on their preparation will result in a better quality, and not having to repeat dishes so often will relieve the monotony.

MEAT SUBSTITUTES AND MEAT EXTENDERS

In making out our menus, we always plan to have one meat substitute and one meat extender. For lunch there are many popular and inexpensive dishes which can be served as meat substitutes, such as: Fig and Vegetable Casseroles; Egg Cutlets with Tomato Sauce; Grilled Tomatoes on Toast with Rarebit Sauce and Bacon; Mushroom Shortcake; Casserole of Mushrooms and Noodles (made with chicken stock); Mushroom Loaf; Mushroom and Vegetable Chop Sueys; Baked Beans; Macaroni and Cheese; Tomatoes and Spaghetti; and Creole Lima Beans.

Many kinds of soufflés such as cheese, asparagus, corn, and vegetable served with a tasty cheese sauce are excellent. "Spaghetti Supreme," which is a spaghetti soufflé served with mushroom sauce, is very good.

Meat extender dishes are also popular for both lunch and dinner. The ones we have found meeting with the greatest favor, which are made from beef products, are: Beef Stew; Goulash; Pot Roast of Beef with Browned Potatoes; Creamed Dried Beef on Toast; Creamed Chipped Beef with Macaroni and Egg en Casserole; Beef Loaf; Braised Beef Balls; Hamburg Steak (made from freshly ground round steak or chuck with some suet in it); Salisbury Steak (made the same as the hamburg with the addition of onion); Green Peppers (stuffed with chopped ham and rice and served with tomato sauce); Macaroni, Beef and Tomato (well-seasoned with onion, celery and spices); and Creole Spaghetti (with grated cheese on top and run in hot oven until cheese is browned).

With veal we make the following: Veal Stew with Vegetables; Veal Stew with Dumplings; Curried Veal with Rice (Duncan Hines' recipe); Veal Loaf with Mushroom Sauce; Veal Croquettes with Creamed Pea Sauce; Stuffed Sweetbreads; and Braised Sweetbread with Mushroom Sauce.

With lamb we make: Lamb Stew with Vegetables; Lamb Creole with Rice; Curried Lamb with Rice; and Shepherd's Pie.

Chicken suggests the following: Chicken Pie; Stewed Chicken and Dumplings; Chicken Loaf (made with uncooked rice); and Chicken Noodle Soup (in which the meat from the backs, necks and wings are used).

If a large salad of fresh vegetables, a plate of fresh fruits, or a fresh tomato or tomato aspic ring stuffed with a meat or fish salad is offered on the menu, many customers will select one of these in preference to a hot meat dish. One of these salads with a bowl of hot and delicious soup would make a welcome change on many a hospital tray and would also serve to keep down the food cost.

In planning desserts we will have to select those which do not require too much sugar since sugar allotments are to be reduced again. Soft custards, cup custards, old-fashioned bread and rice puddings are delicious if well made and do not require excessive amounts of sugar. Baked Apples, Apple Betty, Apple Roll, and Apple Sauce with Gingerbread are all inexpensive desserts and will help use up our large apple crop.

Fruit gelatins of many kinds are good if they are well seasoned. Surplus fruit juices from frozen and canned fruits can be used to improve the flavor of gelatin desserts.

Puddings are more profitable than pies and cakes, and use less of the scarce commodities. If well made, they will prove popular with your guests.

BEVERAGE ECONOMIES

The cost of all of our beverages—tea, coffee, milk and cocoa—is going to be less because they are going to be rationed. How can we operate on a 65 per cent coffee rationing?

Some very good suggestions have been sent out by the Minneapolis Restaurant Association from which I will quote.

Avoid sloppy coffee service and cups that are too full. Cups should be filled to five-eighths of an inch from the top.

Keep the equipment clean and in good working order. Clean equipment and correct temperature in brewing and "holding" will eliminate waste, and in some instances will save 10 or 15 per cent of requirements.

Make sure the grind of your coffee is at its best for producing the maximum results according to the method used. Be sure you are using a good glass coffeemaker grind if you have this type of equipment.

Buy the best grade of coffee your coffee man can provide and be prepared to pay him accordingly.

If the urn is not already equipped with a tricolator which uses a filter paper or a drip basket equivalent, approximately half a gallon more brew per pound can be had by installing a tricolator.

For glass coffeemakers, use less ground coffee and let the brew agitate in the upper bowl for at least two minutes, keeping enough heat under the coffeemaker to keep the brew lively and rolling. The coffee oil that "rides" on the top of the brew needs to be whipped thoroughly into the brew to produce a full flavor and get the actual good out of the grounds. Approximately twenty per cent saving can be effected and the coffee improved. A large percentage of users have been taking the coffeemaker off the heat much too soon after the water has risen to the upper bowl.

Keep all parts of glass coffeemakers scrupulously clean. This will eliminate bad coffee, which is wasted coffee. Give special attention to filter cloths and the springs or discs upon which the cloths are fitted. Failure to clean these well each day will mean that at least one cup out of each bowl of coffee will probably have to be thrown away. Be sure that the filters are properly placed when brewing so that sediment will not escape to the lower bowl and spoil the last cup of coffee. That last cup of coffee in the glass coffeemaker represents 10 per cent of your volume.

To keep your customers supplied with tea on a 50 per cent quota, use only freshly drawn water and bring to a rapid boil. Pour over tea in preheated teapot. If this is done, you can use less tea. Good tea can be made from tea balls (200 to the pound) if the above directions are followed.

OTHER ECONOMIES EFFECTED THROUGH MENU PLANNING

While the subject assigned me is menu planning as related to food cost control there are a few other suggestions which I would like to offer in closing. Overproduction may be one of the causes of a high food cost. Although you may use up in some other way every bit of food left, it not only takes additional labor but additional materials to make it over. Usually, too, it is sold at a lower price than the original dish.

Watch your ice boxes. The food supervisor should go through the boxes daily. Every article of food which has been prepared for a given meal should be used at the next meal. Cooked food deteriorates rapidly. Go over your leftovers the first thing in the morning and change your menu so that they can be used. After lunch go over the luncheon leftovers and readjust your dinner menu if necessary.

Check your merchandise for quality daily. See that perishable foods are used while they are fresh and at their best. Supervise all preparation of foods to eliminate waste. Know your costs and control your portions. See that all of your food is well prepared and well seasoned, looks attractive and tastes as good as it looks. Finally, plan your menus carefully, using all the imagination and ingenuity that you possess.

The problem of serving well-balanced and satisfying menus day in and day out, with a shortage of help on one hand and food rationing on the other, and still showing a profit is a real challenge to all of us. But knowing the importance of keeping our customers well and their morale high, no effort is too great.

Controlling Black Markets in Britain

The British Ministry of Food issues monthly figures on enforcement of food regulations. According to these, by far the largest number of violations—roughly 1000 a month—occur when retailers fail to display prices, or when they sell above the legal maximum. "Supplying or obtaining food without correct authority,"—an offense which may be prompted by profits or by nothing more than the desire of a man to have an extra pork chop—accounts for about 800 cases a month. The balance of the offenders come into court on charges of illegal slaughtering, false declarations, trading without a license, imposing illegal conditions of sale.

So far, we in this country have had little experience with black marketing. That isn't because we are superior human beings. We are only at the beginning of rationing and price control. Supplies of civilian goods are not yet as desperately tight here as they are in most other places in the world. Very rapidly though, we are moving into a situation where the per capita supply of some goods that keep our own families alive, working, healthy, and secure, is going to be more scarce than before the war. The tighter supplies become, the greater the temptation to this person and that to "pull a fast one." British success in minimizing that temptation provides a challenge to match, if not to better, that country's record in keeping black marketing unnecessary, unprofitable and unpopular.—*Consumers' Guide, December 1942.*

Keeping Soldiers and Civilians Nutritionally Fit[1]

MARY I. BARBER

Director of Home Economics, The Kellogg Company, Battle Creek, Michigan, and Food Consultant to the Secretary of War

WAR energy is seething and its ferment is manifest in many places, in many ways—in teeming streets, jampacked buses and street cars, and overcrowded dwellings as well as public eating places. Your city is one of the many that is adjusting to a new tempo and your homes are affected in nearly every phase of daily living.

Nutrition is important because it is even more necessary to be fit in wartime than in a period when the day's problems are normal. Since the National Nutrition Conference, war has been declared; the number of men in the armed forces has increased and promises to be even larger; women are enrolled in the Waacs, the Waves and Waafs; industry is operating twenty-four hours a day, employing more men and women than ever before. Women not in industrial work are giving more and more time to volunteer activities.

How is this affecting the nutrition of each person in civilian life, and the nutrition of war groups—those who turn the wheels of industry, and those offering their lives in defense of their country? It is time to take stock of ourselves; our own health, the health of our communities and of our soldiers. It is time to check to see if each one is participating fully in the national campaign for saving foods and fats, scrap, gasoline, and rubber. Donald Nelson, chairman, WPB, says that "two things are chiefly demanded of us—unity and endurance." Total war calls for no half-way measures, and the price of survival for a free nation is bound to be high. The immense effort required to see that available stocks of goods are distributed where they will count most in carrying on the war leads to restrictive orders, with penalties for violation. But the success of these measures will be only partial without voluntary cooperation on the part of every one. As War Manpower Commission Chairman Paul McNutt said: "The people of this Nation have committed the lives of their young men to battle for our freedom beyond the seas. They will not permit those lives to be wasted so a few may do as they please."

The tasks faced by the Quartermaster Corps of the Army are the same as those faced by homemakers and dietitians, only multiplied—by amounts and shortages, transportation and shipping problems. The greatest task of all is to protect the nutrition of both soldiers and civilians in the face of steadily increasing difficulties.

The amounts of foods that will be needed for the Army are forecast by the preparation of menus well in advance of the month in which they are to be used. A count is taken of the number of times any one food is indicated in one month. This is multiplied by the number of men to be fed. Then it is determined whether or not a sufficient supply will be available. Specialists in the Office of the Quartermaster General keep in close touch with all nonperishable supplies throughout the country. They estimate what percentage of the pack of canned fruits and vegetables, dried fruits, and dehydrated foods will be needed by the Army, and arrange for their purchase and delivery. If any one item has been indicated on the menu so many times that the demand is in excess of the supply, the menu must be changed. These purchases include supplies for our troops stationed in other countries as well as at home.

Specialists in thirty marketing centers take care of the purchase of perishables, including fresh fruits and vegetables, butter, eggs, cheese, poultry, meat, fish, lard and lard substitutes. Through these centers a forecast is obtained so that the people making menus can fit the components to the probable supply.

Rationing is a subject uppermost in our minds just now. Please think of rationing as *sharing*, rather than as *taking away*. A soldier's ration is the food issued to him for one day. Every soldier has a like amount. Civilian rationing is set up to prevent hoarding and to ensure a fair distribution of available foodstuffs.

Shortages affect the Army just as they do civilians. The Army has the advantage of forecasts but it is easier to make changes in the home than in the scattered messes. The Subsistence Branch of the Quartermaster Corps, although not specifically rationed on any food, is bending every effort to conserve the critical items. Some of the ways in which this is

[1] Presented before the American Dietetic Association, Detroit, October 20, 1942.

being done are applicable to any groups, whether large or small.

Nutrition need not be impaired by limited rationing. An English writer states, "After a fairly long period of rationing the people of Britain are not hungry and they are fairly healthy, but dining is no longer a pleasure. Most people are working at least one and a half times the number of hours they worked before the war and nearly everybody is doing some job of national service in addition to routine work." This last sentence applies to us, too. The food shortages in our country as yet are more inconvenient than serious.

Control of critical items is effected in the Army by the following methods:

Coffee and Tea. Coffee can be saved by serving it less often than the customary three meals a day; by preparing the exact amount that will be consumed in a given mess and not having any left over to throw away; by using the minimum amount of coffee that will furnish a good brew and preparing it in such a way as to get the maximum strength from the amount used.

The suggestions given for saving coffee can also be applied to tea. A directive to the Army messes includes a recipe specifying one ounce of tea to one gallon of water. This is a reduction in the amount of tea specified earlier in the recipes for Army cooks. Mess sergeants are instructed to fill the tea bags only half full, so that there will be plenty of room for every leaf to expand and yield its strength and fragrance. A mixture of tea and maté is being tried experimentally.

Sugar. The sugar ration has been cut to about 2.6 ounces per man per day—approximately a pound a week, which is double the sugar ration for civilians. One way in which sugar can be conserved in the Army and elsewhere is by urging soldiers and civilians to make certain that the sugar added to tea and coffee is thoroughly dissolved. An examination of cups, when they go to the dishwasher, may show a large amount of undissolved sugar. Many fruit drinks can be sweetened with syrups from canned fruits, and the actual requirement of sugar reduced. Cake may have a topping of jam instead of a sugar frosting.

Meats. Meat is very popular and people are likely to feel unduly deprived when they cannot have their usual amount. In the Army, rather than observing one meatless day, the menus are planned to include one meatless meal on three different days—a breakfast, a dinner and a supper. Meat can be extended by a more frequent use of stews and hash, and by meat sauces with macaroni and noodles. Meatless dishes must be very well seasoned to be acceptable. A more frequent use of black-eye, kidney and pinto beans has been suggested. Baked beans are always popular and men never tire of them.

Fats. It is most essential that these be saved. Waste kitchen fats make glycerine and glycerine is used in explosives. All Army camps, posts, and stations have been notified that special precautions must be taken, both as an economy measure and to conserve needed materials, to salvage all food waste. The War Department states that food waste from Army kitchens will be divided into four classifications for sale under indefinite quantity contracts: (1) cooked grease both clear and rough, including spent frying fats; (2) raw bones and raw meat trimmings; (3) kitchen waste fit for animal food, excluding grease, bones, and raw meat trimmings; (4) trap grease from interceptors.

The Army and the home can render all trimmings from beef and pork and use the fat for frying. Bacon fat can be used for frying and shortening. Every bit of surplus fat should be carefully strained, refrigerated and sold to the butcher when a can is filled.

Saving by Cooking Intelligently. Science tells us that vegetables must be handled and cooked so as to conserve the vitamins most effectively. This is not always easy in the Army, or when feeding other large groups, even though in the home it is possible to follow approved practices. Army cooks, however, are carefully instructed concerning the proper handling of fresh fruits and vegetables.

The Army finds that a large percentage of soldiers have poor food habits and that this is the reason for a great deal of waste. Plate waste may be the major cause of too full garbage pails. If a child is given balanced meals, taught to eat what is provided and not to take more on his plate than he can manage, when he enters the Army he will not only be a better soldier physically but will contribute to the morale of the mess by his good food habits. Every soldier and every civilian can make a valuable contribution to the national salvage campaign even though he never goes into a kitchen or actually throws away the food he leaves on his plate.

Other Phases of the Problem. It will soon be a year since the guns at Pearl Harbor sounded across America. The Quartermaster Corps had subsistence well under control at that time and has kept in step with changing conditions since that date. As more and more troops go to foreign shores and as transportation of supplies becomes more complex, the subsistence officers are making adjustments to meet the difficult situations. The "scorched earth" policy, or even the lack of an adequate food supply in peacetime, requires a modification of provisions for our soldiers in other countries.

The subject of most general interest in the food field at present is dehydration. Some dehydrated foods were used in World War I but were not very satisfactory. Much more effort is going into the production of dehydrated foods today. Milk—both skim and whole, eggs, potatoes, cabbage, onions,

beets and sweet potatoes, apples, cranberries, prunes, apricots, and soups are purchased in huge quantities for overseas use. Savings are made both in tonnage and space by the purchase of these products. New products and new processes are being tested. Vitamin assays are being made. If products of good enough texture, flavor and food value result, dehydration will receive consumer acceptance after peace comes.

The longer the United States is in the war the more critical certain foods will become. Sugar has been rationed. Next may come coffee, tea, meat and possibly butter. [This paper, it should be noted, was presented on Oct. 20, 1942. Ed.] The spirit of our citizens is such that people will accept this equitable sharing of food with good grace when it becomes necessary. Not one of us could eat an ounce of any food if it meant that our fighters would have less. The nutrition of our soldiers is our first consideration. Fortunately there is plenty of food and if menus are intelligently planned, no one in this country need be malnourished.

The Quartermaster Corps takes care of the soldiers and provides the right food in proper balance. Civilians must be responsible for their own nutrition. Every man and woman should be familiar with the standards set by the Nutrition Yardstick and check to see that they are met each day. Every parent must be responsible for the nutrition of his or her children.

So that soldiers and civilians will be strong—stronger than the enemy—men on the fighting front, men and women on the manufacturing lines or in the home, and children who so soon will be grown—all must be fit to help carry our country through war with its hardships, to peace with its blessings.

Definitions Applicable to Beef

The term "beef wholesale cut" when used in the Revised Maximum Price Regulation No. 169, released by OPM December 10, means and is limited to any of the following cuts meeting the following minimum specifications, derived from the beef carcass, but excluding the offal and any item not included herein: (1) "Hindquarter" means the posterior portion of the side remaining after the severance of the 12-rib forequarter from the side, and comprising the round, full loin including the 13th rib, flank, kidney and hanging tender all in one piece, which posterior portion shall be obtained by cutting the beef side between the 12th and 13th ribs keeping the knife firmly against the 12th rib while cutting down the length of the rib. (2) "Forequarter" means the anterior portion of the side remaining after the severance of the 1-rib hindquarter from the side, and comprising the rib, regular chuck, brisket, short plate and foreshank all in one piece, which anterior portion contains the 1st to the 12th rib, inclusive. (3) "Round" means the portion of the hindquarter remaining after the severance of the untrimmed full loin, and flank from the hindquarter. (4) "Trimmed full loin" means the portion of the hindquarter remaining after the severance of the round, flank, hanging tender, kidney knob and excess loin (lumbar) and pelvic (sacral) fat from the inside of the loin, from the hindquarter. (5) "Flank" means the portion of the hindquarter remaining after the severance of the round and untrimmed full loin from the hindquarter. (6) "Flank steak" means the flat, oval-shaped lean muscle of meat imbedded in the cod or udder end of the flank. (7) "Short loin" means that portion of the trimmed full loin remaining after the severance of the sirloin (loin end) from the trimmed full loin. (8) "Sirloin" (loin end) means the thick portion of the trimmed full loin remaining after the severance of the short loin from the trimmed full loin. (9) "Cross cut chuck" means the portion of the forequarter remaining after the severance of the rib and short plate from the forequarter. (10) "Regular chuck" means the portion of the cross cut chuck remaining after the severance of the foreshank and brisket from the cross cut chuck. (11) "Foreshank" means the portion of the cross cut chuck remaining after the severance of the regular chuck and brisket from the cross cut chuck. (12) "Brisket" means the portion of the cross cut chuck remaining after the severance of the regular chuck and foreshank from the cross cut chuck. (13) "Rib" means the portion of the forequarter remaining after the severance of the cross cut chuck and short plate from the forequarter, and containing parts of seven ribs (6th to 12th, inclusive). (14) "Short plate" means the portion of the forequarter remaining after the severance of the cross cut chuck and the rib from the forequarter. (15) "Back" means the portion of the forequarter remaining after the severance of the short plate, brisket and foreshank from the forequarter, and containing the rib and regular chuck all in one piece. (16) "Triangle" means the portion of the forequarter remaining after the severance of the rib from the forequarter. (17) "Arm chuck" means the portion of the cross cut chuck remaining after the severance of the brisket from the cross cut chuck.

Editorial

THE ARMY DIETITIAN

Now that H.R. 7633 has become Public Law 828, the Army dietitian is on her way *in* the Army and no longer *of* the Army. Whether she remains *in*, after this war is over, will depend upon the record of those now in the service. It is more than an individual responsibility, heavy as this alone may be. Upon each dietitian now in the service rests a dual responsibility—to herself and her job, and to all other dietitians in the service. Each must prove her worth so that when the war is over the dietitian will have become a permanent and integral part of the Medical Department.

Some will face seemingly insurmountable difficulties, but these, if approached in the spirit of selfless and willing service, can be largely overcome. Young dietitians today, whether in Army or civilian hospitals, must realize that the situations they will meet are not being made to order for them. In many instances they must be prepared to meet problems quite foreign, perhaps, to the experiences and conditions of their period of training.

Most essential it is, then, that they enter new positions, civilian or military, unhandicapped by preconceived and hard-shelled attitudes toward their place "as professionally trained women" in a wartime scheme. They must remember that no task is demeaning provided it is done well. If the avenue of approach, the conventional one of their training, seems for the moment obscured by conflicting authority or the exigencies of wartime conditions, they must be alert to other means of proving their worth, even if it be temporarily serving in a capacity which may seem to be unworthy of their five years' arduous training. All that matters is that they do the job well, whether it be the actual preparation of a hundred or so light diets, or the "manning" of a battery of Army ranges. It must be remembered that no war is won from the vantage point of the swivel chairs of peace.

A spirit of determination to succeed in the task before her, to merit in some degree the high regard now enjoyed by the Army nurse—the old Army spirit, if you will—must now come alive in every Army dietitian.

FOOD CONSERVATION

Many people, resting easily under the assurances of 1940 and early 1941 that food was plentiful for us at least, grew to believe that this, in truth, was a different war from that of 1917–18. The National Nutrition Conference of May 1941 stressed better nutrition and in all the public addresses at that time little or nothing was said of food conservation, of possible food shortages.

And so we come to 1943 and face with something of a shock the fact that food shortages promise to be fully as acute, if not more so, than in 1917–18, with the shortages now as then, centering on animal foods and perishables. In fact, for the first time in our history we are faced with the need for over-all rationing. The Nutrition Program, therefore, may soon be overshadowed by the Food Conservation Program, wherein the question of selecting the best, nutritionally, becomes the problem of substituting the next best, most anything, in fact—if you can get it, and know how to cook it! Once a food is suggested as a substitute for another, such as syrup or honey for sugar, or cheese for milk, or eggs and fish for meat, it is but a question of time before the substitute, in turn, becomes scarce.

One of the most practical solutions to the problem, therefore, is a simple one—conservation—elimination of all edible waste and at the same time, to put it bluntly, gluttony. Lavish servings should be out for the duration and the accompanying half-eaten rolls, the goodly portion of meat and vegetables returned on the plate, even the supporting lettuce leaves on the salad plate and the outer crust of pie still holding its rich quota of animal fat! We are told that we face the prospect of being reduced to the food level of some of our fighting allies—if so, it should have a salutary effect on the most wasteful people of the world, few of whom know the pinch of hunger.

From data released in December by OWI to magazine editors for publication in February and March we are told "Just where shortages will arise at given times cannot be stated with any degree of accuracy." But it is those "animal foods" which are desired above all by our fighting men and our fighting allies. *They must not be wasted.* Transportation difficulties and lack of manpower often jeopardize our supplies of fruits and vegetables. The answer again is conservation of every edible spear and leaf, more gardens in the vast areas of untilled land, and conservation of every usable jar and can in which to save this food for another winter. Golf clubs, too, for instance, might well give way to useful tools like

the spade and the hoe—decorative flowers to the bright radish and the cheerful cabbage. Incidentally, it looks like a great kraut year for those who can eat it. But it is in our riches of cereal grains that we must place chief dependence. To every extent that this is possible these must be used to extend the flavor of meats, fats and dairy products.

It is a time for every dietitian to apply her practical skill to the utmost. It is a day for a return to the old-fashioned spirit of thrift and housewifely skill—the spirit that helped to build our nation. It is no time for panic, for worry because of failure to meet *every* demand, mayhap, of the yardstick of good nutrition. It should be kept in mind that the men of Nippon, up to now, have been getting along very well on rice and fish, and man is believed to be one of the most adaptable animals known to science.

MEAT AND DAILY PROTEIN REQUIREMENTS

In a leaflet entitled "Food for Victory"[1] by Frances Stern, Chief of the Food Clinic, Boston Dispensary, and Assistant in Medicine, Tufts Medical School, the importance of meat as a protein food is explained, and the foods which are approximately equivalent to meat are tabulated in convenient chart form as follows:

PROTEIN FOODS	HOUSEHOLD MEASURE	PROTEIN	CARBOHYDRATE	FAT	CALCIUM	IRON	VITAMIN A	THIAMIN	ASCORBIC ACID	RIBOFLAVIN
		gm.	*gm.*	*gm.*	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*
Meat	1 ounce	7		5	4	1.1		36		30
Milk	1 glass	8	12	10	288	.6	464	128	5.2	520
Cheese, American	1 ounce	8	1	11	279	.4	900	14		150
Fish (non-fatty)	1 ounce	6			7	.3		10		
Egg	1	7		5	33	1.5	500	75		165

Miss Stern has also listed the amounts of certain foods which supply approximately one-quarter oz. (about 7 gm.) protein or the amount per 15 lb. body weight recommended by the National Research Council, thus:

COMPLETE PROTEIN	INCOMPLETE PROTEIN
1 oz. meat	½ cup dried beans, peas, lentils (cooked)
1 egg	2 medium potatoes
1 oz. fish	1 large sauce-dish cereal
1 glass milk	2 slices bread
1 oz. cheese	6 crackers (2″ by 2″)
	1 oz. nuts

She also explains how the homemaker can use the above tabulations and the National Research Council standards in planning the family meals. In the case of milk, Miss Stern makes this helpful comparison: one glass of milk used in place of 1 oz. meat will provide: same amount of protein, 2 times more energy value, 2 times as much fat, 70 times more calcium, one-half as much iron, 3½ times more thiamin, 17 times more riboflavin, and carbohydrates and vitamin A which meat does not provide.

Lest the above comparisons be misconstrued, the difference between complete and incomplete proteins and the reason why one-half of the day's protein intake should be from an animal source are briefly explained. Miss Stern then neatly ties in all of her illustrative examples with the present meat situation by the concluding statement that the 3 oz. meat per day required for women and 4 oz. for men come well within the suggested meat ration to be allowed per person.

[1] Reprinted by Harold Cabot & Co., Inc., from an article which appeared in fifteen suburban newspapers.

Current Comment

OVERSEAS HOSPITAL RATION, U. S. ARMY

LIEUT. CLAUD S. PRITCHETT[1] AND COL. PAUL E. HOWE[2]

Hospitals of the Army in the continental United States are usually rationed on the Garrison Ration plus 50 per cent. While the ration is defined as "the allowance of food for the subsistence of one person for one day," in effect the kinds and quantities of food are a basis on which is determined the money which must be available for the purchase of food.

Troops in the field usually receive the field ration, or quantities of food prescribed by the commanding officer at some level of command. In the continental United States the field ration is composed of the usual selection of foods available. Troops overseas have as the basic ration a selection of nonperishable foods: *i.e.* foods that do not require refrigeration, based on a 10-day menu. This ration may be used as such or modified by the substitution of available foods, usually fresh foods.

There are conditions under which the hospitals will be unable to obtain all the fresh foods required for special dietaries. Furthermore, hospital treatment often involves more than medical care and the dietary of the man who is well. To meet this problem an overseas hospital ration has been prepared, and is a part of the automatic shipment of the expeditionary rations planned for use where local supplies or refrigeration facilities are not available. This ration, like the expeditionary ration, is based on a menu and the quantities of food necessary to prepare this menu for 100 men.

[1] Sanitary Corps, Army Medical School, Army Medical Center, Washington, D. C. Lieut. Pritchett is a graduate of an approved training course for dietitians and a member of the American Dietetic Association.

[2] Sanitary Corps, Office of the Surgeon General, U. S. Army.

The ration is based on the assumption that 85 per cent of the patients in the hospital can eat the regular ration, with some supplements, and that 15 per cent require special diets. This 15 per cent is divided among the various types of diets as follows: Light, 3 per cent; Soft, 6 per cent; Liquid, 4 per cent; and "Special," 2 per cent. This allocation is based on average experience. It would not hold for special conditions. A menu and the quantities of food to prepare it are planned for each of the diets listed. The choice of foods is limited to suitable foods that are procurable. It will be modified as experience and changes in procurement dictate. Since the special diets are often consumed in limited quantities, one multivitamin capsule or tablet per day, representing one-half the daily allowances set up by the National Research Council for vitamins A and D, thiamin, riboflavin, nicotinic acid, and ascorbic acid, is supplied for these diets.

The menus for the Overseas Hospital Ration and the quantities of food required to prepare them for 100 men are presented in a manual entitled "Overseas Hospital Ration Menu." [Excerpts from the manual appear in the article immediately following. Ed.] Only a limited personnel and limited time were available for the development of the menus, determination of the quantities of foods to use, and compilation of the issue charts. As it is realized that many improvements can be made, suggestions and criticism of the ration are desired.

CHARACTERISTICS OF THE OVERSEAS HOSPITAL RATION[1]

The Overseas Hospital Ration is designed for use in frigid, temperate and tropical areas. Among the explanatory notes and suggestions which accompany the assembled data prepared in the Office of the Surgeon General, is one which we hope the dietitian on overseas hospital duty will be in a position to enforce, namely: "Care should be taken to insure that certain attractive foods provided for the hospital diet are not diverted from the purpose for which intended." Other items of interest are the inclusion of lemon and orange powder fortified with ascorbic acid, the daily allowance of 4 oz. tomato juice or tomatoes, the use of dried whole milk (with stress laid on the need to include all that allowed in the menu, if not in beverage form then in cooked products), the specification of enriched flour (with two slices of bread per man per meal specified), and the suggestion that all liquids from canned fruits and vegetables be used.

Ten menus for the regular hospital diet and for the light, soft, and liquid diets, and the requisite quantities of food in units for 100 patients, are given in the ration manual. A sample of each one of these four types of diets follows:

[1] Based on a digest of "Overseas Hospital Ration Menu," prepared by the JOURNAL staff.

Menu No. 1 Regular Hospital Diet

BREAKFAST	DINNER	SUPPER
Grapefruit	Dehydrated Soup	Spaghetti and Tomato Sauce
Oatmeal	Crackers *or* Croutons	Sliced Cheese
Milk	Chile con Carne	Carrots
Pork Sausages	Buttered Rice	Bread
Hot Cakes	Spinach	Butter
Bread	Vegetable Salad	Vanilla Cake
Butter	Salad Dressing	Tea
Syrup	Bread	
Coffee	Butter	
	Sliced Pineapple	
	Coffee	

Quantities in Units Per 100 Patients

INGREDIENT	UNIT	BREAKFAST	DINNER	SUPPER	TOTAL
Sausages, Pork	2 lb. can	15.			15.
Chile con Carne w/o Beans	#10 can		5.		5.
Eggs, Dried	lb.	.75		.56	1.3
Milk, Whole, Dried	lb.	10.8	1.5	1.8	14.*
Cheese, A. C., Canned	lb.			6.	6.
Butter, Canned	lb.	3.	4.	3.	10.
Fat	lb.	1.1		3.	4.1
Oil, Salad	lb.		4.		4.
Flour	lb.	12.		2.	14.
Oatmeal	lb.	7.			7.
Rice	lb.		7.		7.
Crackers *or* Bread	lb.		5.		5.
Spaghetti	lb.			10.	10.
Cornstarch	lb.			.5	.5
Bread, Fresh	lb.	10.	13.	13.	36.
Beans, Kidney, Dry	lb.		8.		8.
Sugar, Granulated	lb.	5.75	5.	8.6	19.4
Sugar, XXXX	lb.			4.	4.
Syrup	#10 can			2.	2.
Spinach	#10 can		3.		3.
Carrots	#10 can			3.	3.
Tomatoes	#10 can			3.	3.
Grapefruit	#10 can	5.			5.
Vegetables, Mixed†	#10 can		3.		3.
Pineapple, Sliced, Canned	#10 can		4.		4.
Coffee	lb.	5.	5.		10.
Tea	lb.			1.	1.
Soup, Dehydrated	lb.		8.		8.

* *Or* 56 lb. evaporated milk.

† When not available, use an equivalent quantity of assorted vegetables.

Menu No. 1 Light Diet

BREAKFAST	DINNER	SUPPER
Grapefruit	Dehydrated Soup	Spaghetti and Tomato Sauce
Oatmeal	Crackers *or* Croutons	Carrots
Milk	Roast Beef	Bread
Creamed Chipped Beef on Toast*	Brown Gravy	Butter
Bread	Buttered Rice	Vanilla Cake
Butter	Spinach	Tea
Jam	Vegetable Salad	
Coffee	Salad Dressing	
	Bread	
	Butter	
	Sliced Pineapple	
	Coffee	

Quantities in Units Per 100 Patients

INGREDIENT	UNIT	BREAKFAST	DINNER	SUPPER	TOTAL
Beef, Dried, Chipped*	lb.	7.			7.
Roast Beef, Canned	lb.		40.		40.
Eggs, Dried	lb.			.6	.6
Milk, Whole, Dried	lb.	9.8	1.5	1.8	13.1†
Cheese, A. C., Canned	lb.			3.	3.
Butter, Canned	lb.	3.	4.	3.	10.
Fat	lb.	2.	1.	3.	6.
Oil, Salad	lb.		4.		4.
Oatmeal	lb.	7.			7.
Crackers *or* Bread	lb.		5.		5.
Flour	lb.	1.	2.	2.	5.
Rice	lb.		7.		7.
Spaghetti	lb.			10.	10.
Cornstarch	lb.			.5	.5
Bread, Fresh	lb.	18.	13.	13.	44.
Sugar, Granulated	lb.	10.	5.	8.6	23.6
Jam	#10 can	2.			2.
Sugar, XXXX	lb.			4.	4.
Spinach	#10 can		3.		3.
Carrots	#10 can			3.	3.
Tomatoes	#10 can			3.	3.
Grapefruit	#10 can	5.			5.
Vegetables, Mixed‡	#10 can		3.		3.
Pineapple, Sliced, Canned	#10 can		4.		4.
Coffee	lb.	5.	5.		10.
Tea	lb.			1.	1.
Vinegar	lb.		2.		2.
Soup, Dehydrated	lb.		8.		8.
Bouillon Cubes	each		32.		32.

* When not available, use canned roast beef (20 lb.) *or* an equivalent food substitute.

† *Or* 52 lb. evaporated milk.

‡ When not available, use an equivalent quantity of assorted vegetables.

Menu No. 1 Soft Diet

BREAKFAST	DINNER	SUPPER
Grapefruit	Strained Dehydrated Soup	Spaghetti and Tomato Sauce
Oatmeal	Crackers *or* Croutons	Purée Carrots
Milk	Chopped Roast Beef	Bread
Creamed Chipped Beef on Toast*	Brown Gravy	Butter
Bread	Duchess Potatoes	Prune Whip
Butter	Purée Spinach	Tea
Jelly	Bread	
Coffee	Butter	
	Egg Custard	
	Coffee	

Quantities in Units Per 100 Patients

INGREDIENT	UNIT	BREAKFAST	DINNER	SUPPER	TOTAL
Beef, Dried, Chipped*	lb.	7.			7.
Roast Beef, Canned	lb.		40.		40.
Eggs, Dried	lb.		5.		5.
Milk, Whole, Dried	lb.	9.8	7.	1.5	18.3†
Butter, Canned	lb.	3.	4.	3.	10.
Fat	lb.	2.	1.		3.
Oatmeal	lb.	7.			7.
Spaghetti	lb.			10.	10.
Flour	lb.	1.	2.		3.
Crackers *or* Bread	lb.		5.		5.
Bread, Fresh	lb.	18.	13.	13.	44.
Sugar, Granulated	lb.	10.	10.	5.	25.
Jam	#10 can	2.			2.
Gelatin Dessert Powder	lb.			5.	5.
Spinach, Purée, Canned	lb.		20.		20.
Carrots, Purée, Canned	lb.			20.	20.
Tomatoes	#10 can			3.	3.
Grapefruit	#10 can	5.			5.
Potatoes, Dehydrated	lb.		5.		5.
Prunes, Dried	lb.			8.	8.
Coffee	lb.	5.	5.		10.
Tea	lb.			1.	1.
Soup, Dehydrated	lb.		8.		8.
Bouillon Cubes	Each		32.		32.

* When not available, use canned roast beef (20 lb.) *or* an equivalent food substitute.

† *Or* 71 lb. evaporated milk.

An "issue chart" for 10 days gives the total pounds per 100 patients, or 1000 hospital rations. A footnote to this chart states that: "Substitutions may be made in kind or amount as new foods become available or because they are unobtainable. It is neces-

Quantities of Foods Required for the Regular and Each of the Special Diets for Menus No. 1 Overseas Hospital Ration Menu

INGREDIENT	UNIT	DAILY ALLOWANCES OF FOOD FOR EACH DIET; BASED ON (A) 100 PATIENTS AND (B) THE PROPORTIONATE NUMBER OF PATIENTS REPRESENTED IN THE TOTAL HOSPITAL RATION									TOTAL UNIT : FOR 100 TOTAL HOSPITAL RATIONS (SUM OF 85 REGULAR, 3 LIGHT, 6 SOFT, 4 LIQUID, 2 SPECIAL)
		Regular		Light		Soft		Liquid		Special	
		100	85	100	3	100	6	100	4	2	
Beef, Dried, Chipped	lb.			7.	.21	7.	.42			.16	.79
Beef, Roast, Canned	lb.			40.	1.20	40.	2.40			.80	4.40
Chili con Carne w/o Beans	#10 Can	5.	4.25							.10	4.35
Sausages, Pork	2 lb. Can	15.	12.75							.37	13.12
Eggs, Dried, Whole	lb.	1.3	1.11	.6	.02	5.	.30			.09	1.52
Milk, Whole, Dried *or*	lb.	14.	11.90	13.1	.39	18.3	1.10	34.4	1.38	.68	15.45
(Milk, Evap., Canned)	lb.	(56.)	(47.60)	(52.)	(1.56)	(71.)	(4.26)	(137.)	(5.48)	(2.76)	(61.66)
Cheese, A. C., Canned	lb.	6.	5.10	3.	.09					.09	5.28
Malted Milk, Powder	lb.							6.	.24		.24
Butter, Canned	lb.	10.	8.50	10.	.30	10	.60			.20	9.60
Lard (Lard *or* Lard Sub.)	lb.	4.1	3.49	6.	.18	3.	.18			.10	3.95
Oil, Salad	lb.	4.	3.40	4.	.12					.08	3.60
Flour	lb.	14.	11.90	5.	.15	3.	.18			.13	12.36
Oatmeal	lb.	7.	5.95	7.	.21	7.	.42			.08	6.66
Rice	lb.	7.	5.95	7.	.21					.09	6.25
Crackers *or* Bread	lb.	5.	4.25	5.	.15	5.	.30			.10	4.80
Spaghetti	lb.	10.	8.50	10.	.30	10.	.60			.20	9.60
Cornstarch	lb.	.5	.43	.5	.02			5.	.20	.05	.70
Bread, Fresh	lb.	36.	30.60	44.	1.32	44.	2.64			.80	35.36
Farina	lb.							5.	.20	.05	.25
Beans, Dry, Kidney	lb.	8.	6.80							.15	6.95
Glucose, Karo, Blue, Canned	lb.							10.	.40		.40
Jam, Canned	#10 Can			2.	.06	2.	.12			.03	.21
Sugar, Granulated	lb.	19.4	16.49	23.6	.71	25.	1.5	29.5	1.18	.47	20.35
Sugar (XXXX)	lb.	4.	3.40	4.	.12					.08	3.60
Syrup	#10 Can	2.	1.70								1.70
Gelatin Dessert Powder	lb.					5.	.30	5.	.20	.11	.61
Carrots	#10 Can	3.	2.55	3.	.09					.08	2.72
Spinach, Purée, Canned	lb.					20.	1.20				1.20
Carrots, Purée, Canned	lb.					20.	1.20				1.20
Spinach	#10 Can	3.	2.55	3.	.09					.05	2.69
Tomatoes	#10 Can	3.	2.55	3.	.09	3.	.18			.06	2.88
Tomato Juice	#10 Can							8.	.32		.32
Grapefruit	#10 Can	5.	4.25	5.	.15	5.	.30			.10	4.80
Grapefruit Juice	#10 Can							8.	.32		.32
Orange Powder, Canned	lb.							6.	.24	.15	.39
Potatoes, Irish, Dehydrated	lb.					5.	.30			.16	.46
Vegetables, Mixed	#10 Can	3.	2.55	3.	.09					.07	2.71
Pineapple, Sliced	#10 Can	4.	3.40	4.	.12					.08	3.60
Prunes, Dried	lb.					8.	.48			.09	.57
Cocoa	lb.							2.	.08		.08
Coffee	lb.	10.	8.50	10.	.30	10.	.60	10.	.40	.20	10.00
Tea	lb.	1.	.85	1.	.03	1.	.06	1.	.04	.03	1.01

Quantities of Foods Required for the Regular and Each of the Special Diets for Menus No. 1 Overseas Hospital Ration Menu—Concluded

INGREDIENT	UNIT	DAILY ALLOWANCES OF FOOD FOR EACH DIET; BASED ON (A) 100 PATIENTS AND (B) THE PROPORTIONATE NUMBER OF PATIENTS REPRESENTED IN THE TOTAL HOSPITAL RATION									TOTAL UNITS FOR 100 TOTAL HOSPITAL RATIONS (SUM OF 85 REGULAR, 3 LIGHT, 6 SOFT, 4 LIQUID, 2 SPECIAL)
		Regular		Light		Soft		Liquid		Special	
		100	85	100	3	100	6	100	4	2	
Bouillon, Cubes	Ea.			32.	.96	32.	1.92			.02	2.90
Chicken Soup, Canned, Conc.	lb.							25.	1.00		1.00
Oyster, Stew, Canned, Conc.	lb.							25.	1.00		1.00
Soup, Dehydrated, Enriched	lb.	8.	6.80	8.	.24	8.	.48			.16	7.68
Multivitamin Tablet	Ea.			100.	3.	100.	6.	100.	4.	2.	15.

Menu No. 1 Liquid Diet

BREAKFAST	DINNER	SUPPER
Orange Juice*	Strained Chicken Soup†	Strained Oyster Stew†
Farina Gruel	Grapefruit Juice	Tomato Juice
Milk	Thinned Cornstarch Pudding	Gelatin Dessert
Coffee	Coffee	Tea

Extra Nourishments: Cocoa and Malted Milk.

Quantities in Units Per 100 Patients

INGREDIENT	UNIT	BREAKFAST	DINNER	SUPPER	EXTRA HOUR	TOTAL
Milk, Whole, Dried	lb.	12.8	7.8	1.5	12.3	34.4‡
Malted Milk Powder	lb.				6.	6.
Farina	lb.	5.				5.
Cornstarch	lb.		5.			5.
Sugar, Granulated	lb.	10.	10.	5.	4.5	29.5
Gelatin Dessert Powder	lb.			5.		5.
Glucose	lb.				10.	10.
Tomato Juice	#10 can			8.		8.
Orange Powder*	lb.	6.				6.
Grapefruit Juice	#10 can		8.			8.
Coffee	lb.	5.	5.			10.
Tea	lb.			1.		1.
Cocoa	lb.				2.	2.
Chicken Soup, Canned Conc.†	lb.		25.			25.
Oyster Stew, Canned Conc.†	lb.			25.		25.

* When orange powder is not available, use 8 lb. orange concentrate in place of 6 lb. orange powder.

† If substitution is necessary, use available soups *or* soup components.

‡ *Or* 137 lb. evaporated milk.

sary for the surgeon and the quartermaster to maintain close liaison with each other in order that the surgeon shall be informed of modifications in the ration items available or in the issue of subsistence supplies." Finally, there are charts showing total quantities of foods required for Menus No. 1, No. 2, No. 3, etc. The quantities for No. 1 are stated in the accompanying chart.

SANDWICH-MAKING METHODS[1]

JEAN HUGHES DUNNIGAN[2]

No doubt many of you have been asked to teach canteen classes. Some of you have had to plan and develop the course to suit your community, in relation to its particular problems. In most canteen classes, after you have thought about a hot food, sandwiches are next in importance. They have always rated high at the canteens. There is no need to mention their popularity in almost every kitchen whether it be small or large. It is the purpose of this demonstration to show you from our extensive study the various ways in which sandwiches are prepared and the method which we found to be most practical.

Because of a desire to know the most efficient procedures in sandwich making, a committee of hospital and managing dietitians was formed to investigate present procedures and to report the method most successful. The committee members were from all parts of the United States, representing hospitals, hotels, school lunchrooms, industrial cafeterias, college dormitories, private school dining rooms, and commercial catering companies.

This committee had two additional objectives: first, to reduce fatigue of workers; second, to increase efficiency. Under the second heading were included such items as proper equipment, arrangement of equipment, organization, orderly appearance of unit, and reduction of working time through improved methods.

[1] Presented before the American Dietetic Association, October 22, 1942. The article following this, entitled "Sandwich-Making Demonstration," is based upon stenographic notes made during the demonstration.

[2] Dietitian, Detroit Board of Education.

To carry out these objectives, opinions were sought from committee members and many other colleagues. We also consulted efficiency-in-motion experts, such as Mr. A. I. Hess, Eastman Kodak Company; Dr. Ralph M. Barnes, State University of Iowa; and Dr. Galbraith, Purdue University. From their remarks questionnaires were developed for the purpose of forming a detailed pattern for motion observation.

Some of the questions were:

Do you butter both slices of the bread?
Do you buy sliced bread?
Do you add lettuce?
Do you wrap or bag your sandwiches?
Approximately how many do you sell?
Do you place the bread all over the working surface area? (a) For buttering? (b) For filling?
Do you place the bread in stacks? (a) For buttering? (b) For filling?
Do you know a better way to make sandwiches?
How many employees work on sandwiches? (a) Do they work together? (b) Is this the most satisfactory number?

Each member was also asked if she would cooperate in every detail whether or not the procedure was common to her own particular eating place. For instance, if her usual method called for trimming crusts from the bread before making sandwiches, would she, please, refrain from doing so, if requested, for the purposes of the study.

A tabulation was then made of the replies from the questionnaires. New ideas were plentiful. With these ideas in mind a work sheet was sent to each committee member asking her to observe and time: ten studies for one minute, for five minutes, and for one hour, if possible, on the different methods presented. The instructions also called for an inexperienced sandwich maker to perform these tasks for the purpose of the time studies. This was to prevent any previously developed working pattern from affecting the results. Butter and filling were to be of whipped cream consistency. Only one slice of the bread was to be buttered. Bread was unwrapped before observation began. All equipment had to be in a particular place. Three methods were presented since they were the methods most in use, *i.e.*: "stacks," "in hand," and covering "surface area."

The "stacks" method follows: Place one buttered slide on tray. Place filling on it and spread. Place two slices on top of filled slice, spread top one with butter, spread with filling, place two more slices on top of filling and continue until five sandwiches are made in a stack. Make six stacks on a tray. Cover with damp cloth. Repeat procedure until quantity desired is obtained.

The "in hand" method is this: Butter bread in stacks, pick up two slices. Spread top buttered slice with filling. Place bottom slice on top of filled slice. Drop sandwich on tray or table.

The "surface area" method comprises the following: Spread bread all over working surface area, using both hands. Butter all bread. Place scoop of filling on each slice of bread. Spread filling. Place two slices of bread over each filled slice and repeat procedure.

The cutting and wrapping of sandwiches was timed separately.

Of these three methods, the committee found the "surface area" the most efficient. In one minute, nine to fourteen sandwiches could be made by the "surface area" method. The "stacks" method was next, with four to seven sandwiches per minute. The hand method proved slowest, only two to five sandwiches being made per minute.

Adding lettuce, cutting sandwiches, using trimmed bread, and buttering both slices of bread tended to slow production. Wrapping was found to be faster than bagging sandwiches. Nine uncut sandwiches could be wrapped in one minute. Only five uncut sandwiches were bagged in one minute.

The question arises, what is the best method when both slices of bread have to be buttered? It was found that a modified form of the surface area method worked best. The bread is spread out all over the table, using both hands. All bread is buttered. Next, filling is placed on the second horizontal row, the fourth row, and the sixth row. After it is spread, the buttered slice rows are then flipped onto the filled rows. This procedure is then repeated until the desired number of sandwiches have been made. If lettuce is to be added to the sandwich, it would be done after the filling has been spread. By using the same employees we found that seven to eleven sandwiches, with butter on both slices, could be made per minute.

The committee also reached other conclusions. The habits of the experienced employee greatly affect the determination of the best procedure in making sandwiches. Temperature is an important factor in speed of spreading butter. If the butter is too hard, or melted, time is lost. It was found that 84°F. is the temperature at which butter spreads the fastest, a temperature which permits the consistency of whipped cream. This is true of fillings also—not that this type of filling is recommended—but it is the fastest-spreading filling. The production line produces more sandwiches in a given time, that is, when each worker has only one operation to perform at a time. The equipment must be in good condition, cutting knives must be sharp, handles on spatulas and knives must be tight and the proper size to allow the hand the best possible grip. The table must be high enough to enable the employee to stand straight or to sit comfortably.

The sandwich-making unit must have organiza-

tion, which sometimes can be easily achieved by having a shelf built over the working area. Here butter, sandwich fillings, waxed paper, etc., can be placed until needed. The illumination must be good. If the filling of the sandwich is quite moist, it is best to wrap and place the sandwich on edge. This prevents sogginess in the bread.

The attitude of the sandwich maker is important also. She must be made to feel that she is responsible for an evenly-buttered and filled sandwich, that each bite should be a treat for customer, soldier, or emergency volunteer. If there be "ahs" and "ums," it will be to her credit.

SANDWICH-MAKING DEMONSTRATION

When the program for the Detroit meeting was being planned it was suggested by Adeline Wood that a sandwich-making demonstration be included. As a result, the preceding paper by Jean Hughes Dunnigan, which is the report of a special study undertaken by her on the subject of sandwich making, was presented at the meeting. In addition, Mrs. Dunnigan demonstrated, deftly and expertly, the methods discussed in her paper.

In introducing Mrs. Dunnigan, Miss Wood said, in part, "There has never been a time when the sandwich has commanded our interest as it does now, in the industrial feeding and canteen programs, and in the school lunch, hospital, and commercial cafeteria." Some brief excerpts from Mrs. Dunnigan's demonstration are quoted verbatim below, also some of her explanatory remarks which supplement those in her short article.

"This is a demonstration of the 'stacks' method of sandwich making: The bread and the butter, the latter in this case being the filling, are placed in front of the sandwich maker. Butter should be of the consistency of whipped cream. Using a spatula, cover the whole slice of bread with one gesture—drop —place two slices on top, butter, place two more on top, butter, etc. always trying to conform to motion studies by putting the two slices flat on top of pile you are spreading. The stacks method probably works best for plain bread and butter. In placing filling on sandwiches you again use spatula and have filling of whipped cream consistency. One scoop into pan should be all you need for each sandwich. In making sandwiches by the stacks method, you work on trays. If you make them in stacks of five sandwiches (ten slices of bread) you will find you can cut your sandwiches without tearing them. Make six stacks, thirty sandwiches to a tray. These are quickly counted.

"There are two ways of doing the 'in-hand' method, either using buttered bread or buttering your bread as you go along. (In an industrial cafeteria one woman who had been making sandwiches for seven years could make twenty-one sandwiches in a minute, buttering and putting on filling.) Pick up two slices, butter, fill, and drop. If buttered bread is used, scoop up filling, spread on, put top slice on, set aside.

"The third method is the 'surface area' for making all sandwiches of a particular kind at one time. Spread all bread out, using both hands, keeping bread in rows. First spread one spatula of butter on each slice. Melted butter applied with brush is faster but does not produce as attractive a sandwich as butter of whipped cream consistency. Then on top of each slice we put two more slices of bread. Begin all over again buttering the top slices. (The efficient sandwich maker can do this without smearing the sides; rhythmic motions are employed in manipulating the knife or spatula.) Then if filling is used, spread filling on the buttered slices and stack sandwiches in the manner just described, in piles of five. The majority of us have better cost control when using a #30 scoop (2⅓ tbsp.) for the filling. This gives a yield of thirty to a quart, and the amount in each sandwich is a little less than with the #20 scoop which is often used for a very well-filled sandwich. By this just-mentioned method you can make more sandwiches in a smaller area in less time.

"To make sandwiches when both slices of bread must be buttered, the bread is spread out in horizontal rows of slices and buttered. Put scoops of filling on second, fourth, and sixth rows. (Shallow dishes make a saving in motion, since there is not so much up and down motion as in using a deep bowl.) Two hands should be used in all operations if possible. In motion studies it has been shown that the motion to and from the body is far faster and easier than the motion from side to side. After the bread is spread, the rows of plain buttered slices, which would be the top row, third, fifth, are then flipped onto those in the filled rows. This is repeated until the necessary number are finished.

"In wrapping, permit the sandwich filling to show instead of using labels to designate the type of filling. In using the sandwich bag, the sandwich is not cut, as the uncut sandwich slips into the bag much faster. We try to save steps, but at the same time we find that if the worker moves a bit she is less fatigued. We use both hands in every procedure. Nine sandwiches can be wrapped per minute without labels; using labels, four and a half sandwiches per minute.

"In using sliced meat, bologna goes much the faster, as handling it necessitates less motions. Take a pile of bologna and one of cheese and pick one slice off each at a time. All meat is steamed before using and in doing that the edges tend to curl. (It is steamed three minutes, unsliced, under about 10 lb. pressure. This brings out the flavor.)"

Evidently there are many ways of flavoring, com-

bining and extending the various spreads, including butter, all of which make for economy and efficiency. Mrs. Dunnigan remarked that in many industrial cafeterias the butter is mixed in with the filling where practicable. The use of milk as an extender in butter was suggested to members of the committee who made the study on sandwich making, but this practice was disapproved. It was agreed, however, that mayonnaise may be used in butter, and that it helps to give the right consistency. In making peanut butter sandwiches it will help to speed production if the peanut butter is of the right consistency. It was also suggested that adding strained honey to peanut butter gives a good consistency. Mustard can be mixed with mayonnaise for sliced ham or bologna.

Experience has shown that the most popular sandwich filling is tuna fish. Minced ham is about second, while egg salad and strongly flavored cheeses are also popular. In school lunchrooms the yellow American cheese is well liked. At the U.S.O. stations, ham salad, egg salad, and plain American cheese are most in demand.

In regard to the physical arrangement of the sandwich-making unit, Mrs. Dunnigan stated that a long table is best, since the worker's arms become less tired when she is walking around than when she stands still at a smaller table. According to Mr. Hess of Eastman Kodak Company, the top of the table should come to the employee's elbow if she is to stand. If the worker sits and leans slightly back against a chair, 32″ should be the height of the table. The spatula must not be too pliant, that is, bend too easily. Two or more people work better together. One butters bread, the other spreads filling. Each worker stays on the same job. If all workers are equally skilled in production, assign a definite operation to each. In making large quantities of sandwiches, the best procedure is to have four people—one to spread the bread out, one to butter, one to spread filling, and one to wrap. If one employee is faster than the others, give her the longest operation, which would be spreading the filling or wrapping—or give her two operations to perform.

FOOD SERVICE EQUIPMENT IN THE EMERGENCY[1]

ANNA JANZEN[2]

The method pursued in obtaining the information sought by this committee and set forth in this report was to interview administrative heads, and to consult with representatives of equipment manufacturers.

As is well known, under present rulings, before any equipment may be purchased, the food unit's priority rating must be established. Those with exceptionally high ratings may still be able to purchase vitally needed equipment. Others are able to obtain only replacements and repairs, and in some cases even the latter are a thing of the past. The following excerpt from a letter written by a leading equipment firm will give some idea of the complications and ramifications of the priority rulings and the resulting predicament in which equipment dealers and users alike now find themselves:

> Priorities are really a nightmare in this business. You ask in your letter what materials we are using and the shortest answer to this question is, "What kind of priority do you have?" The many limitation rulings that are now out concerning materials affect to a very great extent what we can furnish in the way of equipment. If your rating is high enough, such as A-1-K or better, we can use stainless steel from our own stock. We cannot replenish stainless steel on any orders, however, for special equipment. We are still using galvanized iron, but the time is drawing near when a high priority rating will be required for galvanized iron. Copper is on the same list with stainless steel and chrome.
>
> We understand ranges are still available for replacement or for installation if no other equipment is available for cooking purposes. Dishwashing machines, according to the latest ruling, go off the market August 1 [This was August 1942. Ed.] except for the Army and Navy. The dishwashing manufacturers are negotiating with the Director of Priorities at Washington to amend this ruling so that commercial machines can be released to ordnance plants, schools, and hospitals.
>
> It is difficult for us to give you the kind of answer that you want because we ourselves don't know what we can furnish next week as these rulings are coming out so fast that we never know just what to expect. We suggest that you emphasize the conservation of all equipment now in use and postpone any plans with regard to new equipment unless it is absolutely necessary to replace broken down and worn out fixtures.

Much credit is certainly due the food directors who "spent" during the depression; that is, to those who equipped and purchased while equipment and supplies were available and plentiful. They maintained their food prices and kept up their equipment and consequently can now "ride along" comfortably. But it is for the benefit of those who did not or could not do this that our study was undertaken.

The study has revealed that the problem which now confronts the food administrator is not one of *purchasing*, for in these days there is practically no purchasing, but a problem of *reclamation* and *conservation*.

Because of the lower type of labor available to

[1] Report of a subcommittee of the Administration Section, American Dietetic Association, under the chairmanship of Constance C. Hart, and presented before the Association at Detroit, October 21, 1942.

[2] University of Texas, Austin. Others who served on the subcommittee were Rosa Spearman, Dallas; Selma Streit, Scottish Rite Dormitory, Austin; and Florence James Ofelt, Institution Department, University of Minnesota.

most institutions, the food director must of necessity pay closer attention to the details of her job. She should guard equipment more closely than she has ever done before. For example, excessive and unnecessary banging and knocking should be eliminated. Knocking the plumbing bases of counters, ranges, cabinets, and table legs with heavy scrub brushes and mops is one source of heavy abuse. Pulling large heavy stock pots across rough cement floors certainly is another cause of unnecessarily severe wear.

It has been possible to glean from the material gathered in this study certain very well-defined measures which can be taken as a means of conserving equipment now in use:

Ranges and Bake Ovens

Keep burners of gas ranges and ovens clean and properly adjusted.

Turn gas off when not in actual use.

Gas should never be permitted to burn up through openings of range top and along the sides of pots.

Do not light all burners unless actually needed.

Do not put a large pot of cold water or food upon a red-hot top.

Burn the kind of fuel for which the oven or range was built.

Use a good grade of fuel.

Keep the flues clean. (Do you know the flues and clean-outs?)

Keep the throat of the canopy and the stack just above, free from grease and soot.

Inspect the chimney. Be sure you have a good draft.

Learn how to operate the various dampers on coal ranges. Be sure the grates work properly and keep clinkers out of grates.

Keep all bolts and screws tightened and keep the range really clean.

Avoid "oven spill" as much as possible by placing pans of meat loaf, pies, etc. that are apt to cook over, on baking sheets and thus prevent "spill over" from damaging the oven.

Steamers

Tighten up all bolts, joints, and valves.

Be sure all drains are clear and open and that all check valves and pop-off valves and gauges are in order.

Know the exact pressure limit on your equipment.

Dishwashing Machines. Most types of dishwashing machines on the market are quite satisfactory. In the majority of cases, when difficulties arise they are due to the fact that the machine is not properly operated and thoroughly cleaned. Not infrequently one finds that the operator doesn't know that the machine should be rinsed out thoroughly at the end of the day's work. In addition, spray arms should be inspected daily. Strainers, both top and bottom, should be cleaned several times daily. It is probably a good thing to get operating directions from the makers of the machine and keep them posted close to the machine.

All working parts of the dishwashing machine should be checked each day—bolts and screws tightened, valves repaired. The motor should be inspected weekly, and should be oiled with the proper oil for the individual motor. Smaller motors sometimes require a finer and lighter oil. Over-oiling is as dangerous as under-oiling. The shaft to the pump should have a good grade of packing. When there are water leaks around the shaft all old packing should be removed and replaced entirely with new packing.

Refrigerators

The motors should have weekly inspection. They should not be over or under-oiled.

Coils should be kept defrosted so as not to overtax the motor.

Do not wash out the refrigerator with an excessive amount of hot water, as this creates too much steam and resulting moisture. It is better to wash the inside of the refrigerator with the least possible amount of warm soda water and dry thoroughly. Keep "spill-over" wiped up and the box clear at all times so that extensive cleaning with hot water is not necessary. Keep the doors shut as much as possible. Work in a systematic way and use common sense so as to avoid extra and useless going in and out and opening and closing of the doors.

See that all hardware is tightened up and in good shape. Tightening up or reversing hinges, etc. saves much wear and leakage of cold air.

Test the machinery weekly for leaks of refrigerants with the proper agent for the particular refrigerant.

Cooking Utensils. In most instances new aluminum utensils are out of the question. By scouting around a precious few may still be found. Old discarded cast aluminum may again be put into use by rebuffing and polishing. This can be done at a nominal cost by any machine shop.

Most institutions have not been accustomed to using enamelware. The cheap grades are not safe to use and the better grades must be used with greater care than is exerted by the average worker. It is probably better to avoid purchasing enamelware as much as possible and use other substitutes. It might be preferable to heat canned food in the No. 10 can in which it was packed rather than in dented enamelware.

There are a few left-over tin utensils on the market. But anything less than XXXX should not be purchased. Retinned steel is probably the most satisfactory next to aluminum. Earthenware and particularly vitrified china are very satisfactory for certain cookery purposes.

Utensils and cooking pots should be carefully handled, properly washed and dried, and stored according to a well-arranged plan. They should not, under any condition, be used for cleaning buckets (which is frequently done).

Emergency Work Table. A satisfactory emergency serving table (Fig. 1) was planned and made by women students at the University of Texas. The

material consisted of 9 pieces of pipe 6'3" long, 12 pieces 16" long, 8 pieces 10" long, 4 pieces 15" long, 4 3-way ells, 8 4-way ells, and 6 3-way T's. The pipe used in the construction of the table, which was 1½" O.D. pipe, fittings to match, was discarded water pipe, which may still be found about many institutions. The ells and T's may still be obtained in most hardware stores. The pieces were cut the proper sizes and all threaded. The long sides were put together first and the ends joined in last, and adjusted so that they joined evenly. The framework was then painted with machinery enamel.

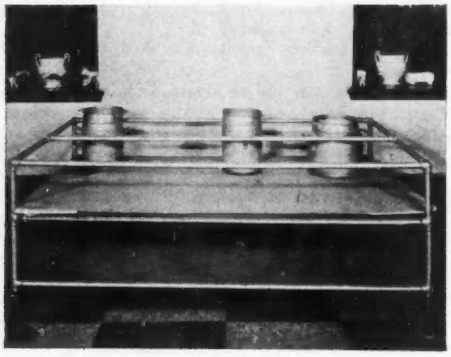

FIG. 1

Three shelves were made by placing across the pipes sheets of "Newmarble," a pressed wood composition. In order to make it possible to convert the table into a steam-table, the top sheet was cut into two pieces lengthwise, so that the half at the back could be slipped over the front half and double boilers inserted through the opening thus provided to the middle shelf.

FOOD PROBLEMS OF STATE INSTITUTIONS[1]

CHRISTINE RYMAN PENSINGER[2]

The many new food problems confronting dietitians in state institutions make it necessary that a detailed educational program be worked out, by which employees and patients in the institutions can be advised as to the different food shortages. Since employees in many state institutions receive maintenance, such as food, living quarters and laundry as part of their salaries, they may not be fully aware of the increase in food prices, or of shortages in various items.

Much dissatisfaction can therefore arise in an institution among employees who feel that they are not getting the food to which they are entitled, and also among patients if the employees make derogatory remarks about the food before the patients.

We know that we are going to be rationed on many more items. There will be plenty of food, but perhaps not of the same variety or quality to which we have been accustomed in the past. In order to forestall criticism if possible, two meetings were held in the State of Illinois to advise dietitians on the seriousness of the food problem. On returning to their respective institutions they held meetings in turn for all employees in each institution, with the assistance of the superintendent. The employees were advised as to the food problems, and were asked to assist in the education of patients so that the patients would understand the food shortages. As additions are made to the items rationed, similar meetings will be held, so that the employees can be forewarned as to their responsibilities in complying with the government regulations.

Sugar Rationing. The problem of sugar rationing has been worked out satisfactorily for most institutions. When rationing first started they were allowed 50 per cent of the sugar used a year ago. This was later stepped up to 75 per cent, and for November and December it was reduced to 60 per cent. "Acute" hospitals, or hospitals where the patients are not permanent, were allowed 85 per cent of their sugar requirements for November and December, but the rationing board does not consider mental or feeble-minded hospitals as "acute" hospitals. During May and June state institutions of Illinois were allotted 80,000 lb. canning sugar, but this allowance was later revoked.

Corn sugar is used almost entirely in the bakeries. Those institutions that have used corn sugar for other purposes in the past are finding it more economical than cane or beet sugar and of course corn sugar is not rationed. In Illinois we do not feel that sugar rationing has effected any hardship whatever. Recipes have been worked out for the use of corn sugar and corn syrup and sent to all dietitians in the state institutions.

Beverages. Coffee is an important item to patients in mental hospitals because of its stimulating effect. In order to make it go farther, 25 per cent cereal (malted barley) and a small amount of chicory have been added to the coffee with satisfactory results. Dietitians are now requisitioning cereal coffee to be used either as a coffee "extender," or served separately as cereal coffee. This product is economical in that it can be purchased for approximately eight cents per pound.

We naturally think of milk as a beverage which can help to take the place of coffee, but in many parts of the country it will soon be difficult to secure enough milk to meet immediate needs. Cocoa is very difficult to secure and will probably become more so.

[1] Presented before the American Dietetic Association, Detroit, October 21, 1942.

[2] Supervisor, Bureau of Institutional Housekeeping, State of Illinois.

Meat. Meat has always been one of the most important as well as one of the most expensive food items in state institutions. In Illinois we normally purchase approximately six million pounds of meat a year. Much of the meat is also produced on the institution farms, especially pork, which totaled two and one half million pounds last year. An effort is being made to increase pork production, as well as to purchase breeders, so that much of the meat needed can be produced at the institutions. Many institutions who formerly purchased meat on a three-months basis have found it necessary now to purchase it on a monthly or weekly basis.

Plans are being made now in all state institutions of Illinois to cure their own meat. The dry-salt-sugar cure will be used principally, but at some institutions meat will be cured in old-fashioned smoke-houses. We have one man in the state who is supervising the curing of meat in the different state institutions.

The state welfare institutions in Illinois normally use 42,000 lb. frankfurters monthly. In the month of October 1942 we were able to secure only 10,000 lb. This economical, easily-served food will have to be replaced by other meat items such as meat loaf, spaghetti with meat, chili con carne and dishes in which dumplings and noodles are combined with small pieces of meat. Soy bean grits and flour are also being used in such items as meat loaf, pork sausage, hamburger, and in all other items where ground beef is a part of the recipe. We have found that meat can be stretched 25 per cent with soy bean grits and the result is a satisfactory product. We are also using larger quantities of eggs and poultry.

Miscellaneous Shortages. We have been unable to secure tapioca for state institution use and it is becoming more difficult to secure such items as cake mixes, pudding powder and other gelatin mixes. The products which we are able to secure have, of course, a higher percentage of corn sugar in them and therefore are not so fine-grained as those used in the past, but with the help problem now prevalent it is more important than ever that good prepared mixes be used rather than permit inefficient help to turn out inferior products. We have also had difficulty in securing flavored gelatin powder.

Canned Food. Since it is going to be more difficult to secure canned food than ever before, we stepped up the canning program this year and plans are being made to produce more fruit and vegetables for consumption fresh next year, as well as to increase the canning program in all institutions having available farms. In order to purchase canned goods today one must be able to take carload lots, in many instances, and to take them when offered. Quotations on these items are not obtainable and one is forced to take the quality offered.

Nutrition and the War

NATIONAL RESTAURANT ASSOCIATION WARTIME EMERGENCY CONFERENCE

The addresses and discussions of the National Restaurant Association Wartime Emergency Conference, October 6–8, which were published in December, contain much information and many expressions of opinion which are of interest to dietitians and nutritionists. A few of these follow:

Col. Roland A. Isker, Quartermaster Corps, U. S. Army, recounted some of the field tests which had been made with the special Army rations, especially the combat rations. He stated that many new developments which are being used for specific purposes in the Army may be used after the war by restaurants and in the homes. One item is an instant rice. The rice is precooked, dehydrated, and issued to the soldiers. Where they do individual cooking, as in the tank corps, the soldier puts the rice in hot water, boils it for one minute, and it is ready to eat. There are also instant cereals in Army use which require the same treatment, one of which may not be of much use after the war. It contains dry milk solids, sugar, salt. All the soldier does is to add water from his canteen, or if he wants it hot, he can put it over a small stove and cook it. Tremendous improvements have been made in the past year with dehydrated soups, according to Colonel Isker, and potato shreds, which were used in industry before the war, are used for making mashed potatoes. Baked beans are made from dehydrated beans to which only water needs to be added. Colonel Isker said that the Army had received 100 per cent cooperation from industry, not only in the development of new products but in producing these in large quantities on short notice. He suggested that one way in which the restaurant industry could cooperate would be to make available the proper foods to men working in war industries so that all effort spent on teaching good nutrition principles would not be wasted.

Watson Green, of Myron Green on the Plaza, Kansas City, Missouri, who acted as chairman of a conference of the Service Restaurants Section, asked for comments from those present, experienced in dealing with the problem of restaurant personnel. In his restaurant, he said, they had had nearly 300 per cent turnover, and that in order to simplify and shorten menus they had taken off underliners under all such items as shrimp cocktails, iced tea, and salad bowls. They are putting one and sometimes two vegetables on the dinner plate to save dishwashing and have changed the use of service stations throughout the dining rooms.

One of the participants in this conference reported that every table which was not adequately covered was removed from the dining room, and that as a result the waitresses were not so tired nor so nervous, and that a count of customers showed that more had been served by removing the tables not covered. Another case was reported in which the menu had been greatly simplified, all sandwiches having been eliminated. In addition, each department manager had been made fully responsible for the employees in his department, and had been given a manual listing the duties of each employee. They are allowed to hire employees for their own departments. The result of this was that managers were more alert to the wants and needs of the employees and several small procedures were changed for the convenience and satisfaction of the employees. An interesting pledge was drawn up for use in this restaurant which all employees sign: "Since fate ordains that I stay home while thousands of our country's best manhood are called upon to risk their very lives defending the freedom and happiness that means so much to me, I do hereby pledge that I will do my best to radiate cheerfulness and happiness at all times. I will meet the glance of every customer with a cheerful smile to help make his meal a happy one. I will be kind and considerate to my fellow workers and especially tolerant with the new ones, always remembering what it meant to me for someone to be kind to me when I was new. In case I am unable to report for work, I will notify my supervisor in ample time to secure someone in my place so that my absence will not cause hardships to those with whom I am working . . . I believe with this troubled world full of misery and heartaches, all of us should do all we can to build a strong courage to back up the fine men at the front whom we love so much." It was reported that in the first month in which this pledge was used, *not one employee left without giving notice.*

There is a bulletin board in the employees' dining room upon which is written every night the jobs which are going to be open for the next day, and the salary paid for each. The offer is made to the employees that if they will find a friend to take a job at the restaurant they will be paid one dollar a week for every week the new employee stays on. (This plan, it was said, had not been very successful.) Negro girls are hired to clear tables for the waitresses and are paid $15 per week by the restaurant and 15 cents per meal by the waitresses.

Another restaurant manager said that he felt it more important to assure waitresses time off and to close the restaurants earlier than to offer pay inducements, as they like to feel that they have "easy jobs." One restaurant owner reported that he had promised the employees a dollar bonus for every day they stayed if they stayed a year. Another reported that the employees are given money rather than meals and are allowed to purchase meals for 25 cents. This plan has worked well.

Mr. Green said that there had been considerable talk about removing table d'hote meals from the menu, since the Government feels that in these meals people are served more food than they really need or want. Under the new plan, rolls and butter would be included with the à la carte orders.

In a session on War Industry Cafeterias, the problem of pleasing the employee clientele was discussed. In reply to a question as to what the employees' reaction would be to the serving of only one meal, rather than a variety, one unidentified participant stated that "employees didn't like anything, no matter how good it was, but the best possible solution was to serve them just the one meal." One suggestion was to serve the Army menu for the day and if complaints are forthcoming to counter with: "When you are in the Army you will eat it!" Another was that it is necessary to prove to labor that a wise choice of food is essential and that a new spirit is necessary in order to aid production. One restaurant operator tried presenting the costs of operation to the labor union in an attempt to educate the men as to why higher prices were necessary for the right foods. In this latter instance, the plan met with success. Another organization, whose regular lunch is 34 cents, served a "Victory Lunch" for 29 cents, and another displayed posters showing profit and loss on various lunches.

As to between-meal feedings and serving from snack wagons, it was the experience of one plant that sandwiches proved to be much more popular than hot soups and that they involved less cost and allowed fast service. One operator expressed the opinion that because all employees do not eat in the cafeteria it is important that the food served on the snack wagons be nutritious, and that the food does not necessarily have to be hot. It was further stated that it is not always possible to distribute between-meal foods, in which case workers will bring food into the plant with them. The labor cost involved in the distribution of between-meal snacks is small. It was reported that in some plants in order to keep up with the volume, potatoes were peeled as much as three days in advance with the result that much of the vitamin content was lost. The general conclusion was that if the management could have better control of their employees, the cafeteria managers would be able to do a better job of feeding.

FOOD RATIONS IN OTHER COUNTRIES

A release from the War Trade Department, British Embassy, dated November 20, 1942, tabulated the average weekly rations of various foods in enemy, enemy-occupied and neutral countries in Europe,

Asia, and Africa. While some of the information is fragmentary and the figures undoubtedly have been superseded by others in many cases, a general idea of the foods available to people in these countries can be gained from the tabulation, and the figures have special significance now that rationing has begun in this country.

The accompanying simplified table, taken from the above-mentioned release, gives the allowances of three classes of foods in certain of the countries. Ranges in figures for adults, in most cases, cover "normal consumer, light workers, heavy workers, very heavy workers, night and long hour workers," the lowest figure pertaining to the normal consumer and the highest to the "night and long hour workers." Likewise, the ranges of figures for children cover infants, children aged three to six, six to ten, and adolescents. It is interesting to note that in only two countries for which figures are available is more than one pound of meat per person per week allowed. Allowances for fat are universally low. Bread allowances for adults range from 37 to 245 oz. per week.

Other foods commonly rationed include potatoes —Germany, 157–210 oz. per week; Italy, 17½; Netherlands, 140–280 for adults, 70 for children; Belgium, 122; France, Finland and the Baltic States, locally rationed. Rice is rationed as follows: Japan, 10½–20 oz. daily for adults, 4½–7 for children; Casablanca, 2; Tangier, 9; Netherlands, 125 gm. for children under 4; Norway, 25. In Germany and Italy, flour, biscuits, cakes and pastries may be had instead of bread, and similar substitutions may be made in other European countries on bread coupons.

Average weekly food rations in Europe, Asia, and Africa

	BREAD	MEAT	FATS
	oz.	*oz.*	*oz.*
Germany and Protectorate	adults, 80–164 children, 39–92	adults 12½–33½ children 7–14	adults 7–20 children 4½–9½
Italy	adults 37–110	3½–5½ (sausage 1½)	3½ (all fats)
Netherlands	adults 63–126 children 32–77	5½–26	adults 3–15½ children 6 (butter and beef fat)
Norway	adults 64–127 children 32	locally rationed	7½–11 (butter or margarine)
Belgium	adults 55–134	5–12½	2½–23½ (butter and margarine)
Denmark	adults 82–130 children 41	unrationed but restricted	10½–16 (butter)
France	adults 68–87 children 25–68	urban 9–16½ rural 6½–14	3½–9 (all fats)
Finland	adults 61–125 children 37–49	3½–7	3–4 (butter and margarine)
Sweden	77–105	6–12 (points sytem)	11–16½ (butter and margarine)
Switzerland	adults 55–104 children 28	adults 8–16 children 3½ (points system)	adults 6½
Turkey	adults 73–245 children 37		
Casablanca (Morocco)		pork 37 other, according to supplies	¼ litre monthly (oil)
Tunisia		local	4½ (oil or vegetable fat)

Milk is rationed in litres per week in most of the countries covered, as follows: Germany, 5.25 for children under 3, 3.50 for children 3 to 6, 1.75 for children 6 to 14, and 3.50 for nursing mothers and men in "unhealthy" occupations; Italy, 3.50; Netherlands, 3.50 for children 4 to 14 and nursing and expectant mothers, 5.25 for children under 4, and 1.75 of skim milk for "normal consumers"; Norway, 5.25 for children under 2, expectant and nursing mothers, and invalids, 7 for children 2 to 15, and 1.75 for children 15 to 18; France, 5.25 for children under 6, 1.75 for children 6 to 14, and 3.50 for nursing and expectant mothers; Finland, 1.4 for adults, 7 for children under 3, and 4.2 for other children; in Bulgaria, children, the aged and the infirm have priority; Sweden is under local rationing; Switzerland, 5 for children under 6, 2.8 for "normal consumer," 3.5 for old people; Algeria allows milk for children, expectant and nursing mothers, old and sick persons only; Tunisia, 3.5 for children under 3, expectant and nursing mothers, old and sick persons. Coffee and coffee substitutes, tea and cocoa are all rationed: Germany, 62 gm. coffee substitute per week to all but children under 3, cocoa powder, 15 gm. to children; Netherlands, coffee substitute, 60 gm.; Norway, 80 gm. cocoa for children under 4; Belgium, coffee substitute, 12 gm., chicory, 30; France, coffee, 10 gm. and coffee mixture, 37 gm. for adults, cocoa mixture, 60 gm. for children and old people; Finland, coffee mixture, 30 gm.; Baltic States, coffee substitute, 80 gm. except to children; Sweden, coffee, 10 gm., tea, 5 gm.; Casablanca, and Rabat, coffee, 60 gm.; Algeria, coffee, 10 gm.; coffee mixture, 60 gm.; Tunisia, coffee, 60 gm., tea, 5 gm.

In some countries and districts jam may be purchased on sugar coupons. Fruits and vegetables are rationed locally. Where eggs are rationed, 2 to 4 a month are allowed. Discrimination is made against the Jews in various German-occupied countries, and in the countries of North Africa differentiation is sometimes made between Europeans and natives, the natives getting the larger rations.

SCHOOL LUNCHROOM MENU PLANNING IN THE EMERGENCY[1]

HELEN TWEEDALE[2]

The basis of good school lunchroom management has always been good menus. And good menus have always meant careful planning. The questions we used to ask ourselves when planning menus were something like this: What will be the very best for my particular school? What will make my counter look the most attractive? What will keep my customers happy and well-fed? The present emergency has given us some new standards. Most of them apply to everything we do. We are learning to strip our life to the barest essentials.

Now, the one question we are likely to ask ourselves as we reconsider all phases of our lunchroom and as we set out to plan a menu is: What is the most important thing my lunchroom does? The answer, of course, can only be, "It provides hot, nourishing meals for students and faculty." That has naturally always been our main concern and it was never easy, but as we look back now we realize that we had many devices to persuade our customers to buy those good lunches. Mushroom sauce did help to sell a spinach loaf, and a little avocado did a lot for a salad counter. We had paper cups and doilies. If we lost a little on roast beef, we made it up on macaroni and cheese. While we were somewhat limited by our low prices, it was still possible to conjure up some "neat displays."

Now, things are different. Many of our standby foods are no longer available. Sugar is rationed. Paper supplies are being curtailed. We have lost trained employees. In some cases, we have been unable to replace them and our total number of staff members has been reduced; and, generally, we have more customers this year who are now able and eager to buy all the things we've been tempting them with for years.

What can we do about it? First of all, we must simplify. Since we have fewer kinds of foods and fewer people to prepare them, we'd better not put them all on the counter on one day. Where we used to serve both a fruit dessert and a milk pudding, perhaps, now we must serve only one of these daily. We can be sure, then, that on pudding day we have a fruit salad, and on fruit dessert day a vegetable salad. It may be the only salad on the counter in place of the former three or four, but it will be planned to supplement both the hot food and the dessert. As we follow this plan through, we find that the best kind of menu to plan these days is one complete meal. It may be a very simple one—hot dish, salad or vegetable or both, bread, milk, and dessert. Perhaps we can have a soup as well—or two main dishes, one with meat and one without. Whatever it is, it may well be the basis of our menu. We can add to it depending upon our luck with deliveries, rationing and employees.

For years we have been clamoring for better food selection habits on the part of our student clientele. We bemoan the mashed potato, chocolate milk and dessert meals they select. Home economics and health teachers are devoting more time and attention to this subject in classes; mothers who work are demanding that their children eat a good lunch at school now that they are better able to pay for it;

[1] Presented before the American Dietetic Association, Detroit, October 22, 1942.

[2] Board of Education, Detroit

and the children, themselves, are learning that there are jobs for them to do in helping to win the war—one of which is to keep fit. You will find that they may even trade a candy bar after school for a bowl of soup.

If we plan this balanced meal for them, therefore, I think they will buy it. We can display a sample tray daily with the complete lunch on it. On our lunchroom walls we can have posters made by the students in their classes, entitled "Eat a Good Lunch —a Victory Lunch," and "It's Patriotic to Keep Healthy," etc. We know some of their favorite dishes. We can serve them often and when we serve the things we know they don't like so well, we can add a little bonus—such as ice cream for dessert or an especially good hot roll or bread.

This sounds like turning a bad situation into a good one. Maybe it is. We anticipate that things are going to be different after the war from anything in our experience. The people of England have already changed many of their food habits, and so must we. Managers of England's community and factory kitchens have taught people to eat new kinds of foods which they have had to eat or starve, and they have learned to like at least some of these foods which at first were so strange and foreign to their tastes. Perhaps we can hope for some similar result in our school lunch program.

Modern Valentine

Oh lady fair of form divine,
Pray won't you be my vitamine?
B_1 with me, my love, and C
How life one long D-light can B.
E-nough! A preacher let us find.
Oh G! I'll be so good and kind.
And ere our time to cross the Styx,
Perhaps we'll B_4, $_5$ or $_6$!

Anon.—*From "Tonics and Sedatives," J. A. M. A., Aug. 2, 1941.*

Johnny's Millennium

Oh, Johnny dear, come here, come here
You must not stray too far
And here's a five-cent piece, my lad
To buy a candy bar.

With minerals and vitamins
It's fortified, my pet
'Twill build you up and keep you strong
And make you husky yet.

We'll throw cod liver oil away
The milk will do for Pa
And work dismissed, we'll all subsist
On just a chocolate bar.

—Helen G. C.

UNUSUAL NUTRITIVE FOODS

A cursory survey of any bibliography on foods reveals that almost every living thing has graced man's bill of fare at one time or another. It also is apparent that primitive peoples, as a rule, have been fortunate in their food selections. The diets of those nations of the world which are most advanced in technological achievement suffer by comparison. Technology directed at the food supply has not been wisely guided, and the result is not a happy one. The dramatic improvement in the death rate throughout the so-called civilized part of the world can only partly be explained by improved nutrition in some sections of these populations. It is mainly due to the application of medical science, especially the application of public health and hygiene. The increasing incidence of degenerative diseases and high incidence of decay of teeth suggest that average vigor in the more civilized races has declined. Whether foods now commonly available are used as economically as possible and whether foods not commonly in use but equally, or even more, nutritious could serve as supplements to common foods, are questions to be answered. In the United States alone some fifty billion pounds of skim milk is largely wasted every year. How much of this is simply thrown away is not known. Much is fed to animals, but this is waste, because the nutrients in skim milk, pound for pound, equal those of muscle meat, and it appears that 10 lb. (4.5 kg.) of the nutrients of skim milk is required to produce 1 lb. (0.5 kg.) of food nutrients in the form of pork. Other less costly food would do as well for hogs. Much more milk solids can be put in bread, cakes and puddings by using dry milk powder than when liquid milk is used. The water in liquid milk limits the amount that can be added. The taste of reconstituted dry milk is less attractive than that of liquid milk, but the taste of custards and other cooked foods made with dry milk differs not at all from, or is superior to, the taste of similar products made with liquid milk. Buttermilk is also highly nutritious, matching skim milk in its content of vitamins and minerals. It also can be dried and thus distributed more economically.

Left over from the milk when the cheese is made is whey. The water of the milk is in the whey, but with it part of the protein—the lactalbumin—some of the mineral matter and most of the vitamins, yet whey is mostly thrown away by manufacturers of cheese. In late years dried powdered whey has found a place in poultry feeds and in candy manufacture. Much more dried whey could be used for human food, and none should be discarded. It is reported that in Germany no milk product may be thrown away and none may be used for feed without a special license. One of the worst of the many bad food habits that Americans have acquired is their use of sweetened carbonated beverages. Many persons take such beverages by the half pint many times a day, with a resulting excessive consumption of sugar. The suggestion has been made that whey after removing its protein be incorporated in these beverages. By such means the minerals and vitamins of whey could make these drinks nutritious.

The most nutritious parts of every carcass are seldom chosen by the customer and go to making fertilizer or feed. The blood, lungs, stomach, liver, pancreas, kidney, brain and heart are spurned by many persons. In southern China a suitable gift for a prospective mother is a pair of pig's feet. She will hope by the time the baby is born to have accumulated perhaps two dozen pairs to help support her demand for calcium during lactation. The Navajo, for example, who in contrast to many other Indian groups has retained his vigor despite proximity to the white man's civilization, consumes all vestiges of the sheep or goat he kills and exhibits a decided preference for the contents of the abdomen. He eats the organs first. The modern American credits the ancient Greeks with a high state of culture, yet Cornwall found references in the Odyssey to many foods men spurn today—foods such as roasted entrails and goat's stomach filled with blood. There is current discussion of deficiency of certain lipoids in the diet of most civilized races. A return to these food habits of the ancient Greek and modern Navajo would at once correct such dietetic error, for the lipoid content of organ meats such as liver is high. Much could be done to improve the nutritive quality of processed meats by including in them organ meat and blood. Blood sausage is popular in Germany. The dog food manufactured by American packers, containing much of what they designate as offals, is demonstrably superior in nutritive value to most of the meat they can for human food.—*Wilder, R. M. and Keys, T. E.: J.A.M.A., 120: 529, 1942.*

Book Reviews

Cross Creek Cookery. By Marjorie Kinnan Rawlings. Drawings by Robert Camp. New York: Charles Scribner's Sons, 1942. Cloth. Pp. 230. Price $2.50.

There is much in Mrs. Rawlings' book to stir even a hardened reviewer of books, especially when snow-bound in Connecticut, for it reflects a warmth of spirit and a free-handed hospitality as lavish as the Florida sunshine. As in the books of fiction by this author, there is no struggle for effect here. The atmosphere and the cuisine, except for one or two recipes (which, we must needs agree with the lieutenant on page 100, seem positively voluptuous), are as homely as your grandmother's back porch.

The story of the collard greens and Godfrey the elegant light brown man servant who "gave an air to any function," an air which, alas, was all he gave, is typical of the many delightfully chatty interludes interspersed here and there in the really businesslike details concerning recipes. And while we cannot attest the accuracy of all these, they sound most enticing. It can be assumed, in any event, that the kindred arts of the pen and the pan are sufficiently attuned to warrant that competence in one bespeaks competence in, or at least respect for, the other.

Mrs. Rawlings has succeeded, too, beyond even the fondest hopes of nutritionists, in venerating the cow. Not since Robert Louis Stevenson's cow, "all red and white" (and with merely a bow to Elsie the glamour girl), has a cow been so revered. For Dora, the vile-tempered Jersey (the author knows her Jerseys among other things), and Chrissie her promising young daughter, are so substantial that we hope to hear more of them. (Incidentally, each of the ice cream recipes specifies either 2 or 4 cups "of Dora's cream.") It is high time, perhaps, that more was said of cows and such, and less of problems past solving by mortal minds.

To Mrs. Rawlings, food has a spiritual as well as a material quality: "Food imaginatively and lovingly prepared, and eaten in good company warms the being with something more than the mere intake of calories. I cannot conceive of cooking for friends or family, under reasonable conditions, as being a chore. . . . The mother or wife who grumbles over the planning and cooking of meals, taints the very vitamins. . . . The breaking of bread together, the sharing of salt, is too ancient a symbol of friendliness to be profaned. At the moment of dining, the assembled group stands for a little while as a safe unit, under a safe roof, against the perils and enmities of the world."

It is a book rich in recipes, and well seasoned with little samples of the author's gentle philosophy and delicious sense of humor.

Stina, the Story of a Cook. By Herman Smith. Illustrated by Eleanora Sense. New York: M. Barrows and Company, 1942. Cloth. Pp. 242. Price $2.

Stina is another homely book, warm with the fire of the old-fashioned kitchen range, and as generous in spirit as its contemporary, the ample apron, edged with cross-stitch and tied in substantial bows. It is a worthy addition to the all too few books, notably by Della Thompson Lutes, which have portrayed the real heart and spirit of America as seen in the heart of its homes, the kitchen. Like Mrs. Lutes' books, the setting, too, is Michigan. Against this background, the memories of a small boy's motherless childhood and of Stina, the Alsacienne cook and housekeeper, who had "known starvation through the siege of Paris," are depicted in beautiful, metered prose characterized by poetic lights and shadows. In fact the recipes, interesting as they are and new to most Americans, are but incidental to the book's real worth. But even when the author writes of recipes or seems carefully to skirt, as well he might, the somewhat overworked subject of nutrition, he lilts his lines in singing prose, a joy to read and re-read. Incidentally, Mr. Smith uncovers one of the weak spots in applied dietetics when he says: "We did not need a Popeye the Sailor when I was a boy. We ate spinach because we liked it, not for what it was supposed to do for us." And, we might add, he probably ate it because Stina knew how to cook it!

Books like this are a welcome surcease today. Escapist literature they may be, but at the same time this sample is an excellent antidote for the slap-dash style and cheap sensationalism of so many current books. A brief excerpt, rather than any comments of this reviewer, will best convey the book's fine literary quality and restful charm: "As I went home the pallid light of a waning moon shone through the great maples whose interlocking branches made the quiet street a tunnel of checkered light and shadow. It was the first time I had ever stayed up till dawn. . . . I could hear the cows lowing softly at the barns as they came up from the pasture. A soft small wind came wandering from the pasture, heavy with the scent of elder flowers and blooming wild grapes. I looked at my hands and thought soon they will be forever free from milking cows. I did not see that house as it was, brooding and tender and sure, did not sense the soul of it, nor all that it knew of others' hopes, others' joys and sorrows. I let myself into the kitchen with its spotless yellow walls, so shining and orderly, and never heard a word of what it had to say, of the years of loving labor it had known with my mother and Stina, of those Christmas and birthday feasts, those radiant Easter eggs, of wedding cakes and christenings, of broth and custards for a sick neighbor, of every plenty for the hungry poor or the wanderer at the door, of all the beauty of the common everyday little things of life, its homely comfort when death stalked through the house with shadowed wings."

Eat Well for Less Money. By Gaynor Maddox. New York: E. P. Dutton & Co., 1942. Cloth. Pp. 219. Price $2.

It would be interesting if we could see publishers' sales figures for the many popular and semi-popular books on the subject of good nutrition which have sprung up like mushrooms during the last year or so. As previous reviews in this JOURNAL have indicated, the ideal book for the purpose is yet to be seen, even though some have been fairly good. Certainly there is no need for so many and some may have

already died a natural death, although with a public which must be all but overwhelmed with the number of such books and unable to discriminate, there is just as much chance that a good one may have died along with a poor one, or in place of a poor one fortified by a come-hither dust cover. Nevertheless, the crop continues to flourish and each new book must be given the attention it deserves, the while we pursue our Diogenesian search for the perfect, or "almost-perfect" book.

The author of *Eat Well for Less Money* has several assets to start with, not the least of which is an ability to write interestingly and what, from our point of view, is more important, to report accurately. In fact, his book is nothing more nor less than a good reporting job on the establishment of nutritional standards by the National Research Council, including the latest information on the essential nutrients as this has been set down by authorities, menu patterns and how to apply them, based on those of the U. S. Bureau of Home Economics and the food tables of Hazel Stiebeling and others, and directions for conservation of food and equipment as furnished by commercial and other authorities. (Mr. Maddox expresses appreciation to Dr. Louise Stanley, U. S. Bureau of Home Economics, and others for their advice and cooperation, including Ruth Van Deman, chief, Information Division, Bureau of Home Economics, Helen Ridley, home economist, and Frances Simmons, home economist, for "particular help in gathering material for this book.") In addition, or rather, interspersed with this material, are several very good suggestions for "charting your food the modern way"; "taking the guess work out of marketing;" the use of "new foods" and feeding the industrial worker. The author has managed to keep his head in the face of the various food enthusiasms. For example (not that the idea is startlingly new), he states that neither milk, nor any other food, can be regarded as "complete" and, "The first thing to do when approaching the subject of vitamins is to resolve to be calm."

In other words, this book can be prescribed as a safe, in fact a pleasant dose for the inexperienced or uninitiated.

Lunching and Dining At Home. By Jeanne Owen. New York: Alfred A. Knopf, 1942. Cloth. Pp. 284. Price $2.50.

This is a collection of menus arranged in groups suitable for spring, summer and winter, with accompanying recipes in amounts sufficient to serve small groups of four or six. Included are several Sunday breakfast and supper menus, also with recipes in amounts sufficient for a specified number of persons.

As would be expected in a book by Mrs. Owen, the menus and many of the recipes have a sprightly originality and as such the book can be read with interest by the dietitian and will be welcomed by the homemaker. It should also stimulate a greater interest in the possibilities of many foods, up to now too little used in America, such as zucchini, lentils, dried split peas, leeks, watercress (to eat, not to look at), and the green and succulent romaine, as well as more and better soups.

Parties for Pennies. By Nancy Webb. Illustrated by Lee Charlick. New York: M. Barrows and Company, Inc., 1942. Cloth. Pp. 216. Price $2.

As the publisher proclaims on the dust cover, this is the book for any household which expects to "keep in touch with friends, give soldiers and sailors on leave a bit of relaxation, entertain visiting relatives and of course do those parties for war weddings."

The author analyzes in a matter of fact way the whole modus operandi of party giving (buffet meals, luncheons, picnics and so on), with a weather eye alert to the cost and the probable gains. She finds, it seems, that mass production gives the best returns—the bigger the party the less the cost per guest.

This is a really remarkable and unique book. Not one of the infinite pre-party details confronting the maidless household has been overlooked. As the author sagely suggests: the menu, the setting, including flowers and china, and even the garb of the hostess should be in keeping. The more substantial menu, leading off with onion soup, for example, calls for checked or peasant type napery, wooden bowls, rolls in a wicker basket, the less exotic floral arrangements, and, we suppose, the simple, wide-eyed, hostess type.

While the style is a little too self-consciously sophisticated, the book nevertheless presents a true picture of the correct and smooth approach to the art of entertaining in a manner acceptable to the "brittle" cosmopolite.

Tables of Food Values. By Alice V. Bradley, M.S., Associate Professor of Nutrition and Health Education, State College, Santa Barbara, California. Second edition. Cloth. Pp. 224. Price $3.50.

In the Foreword to this new and completely revised edition, Charlotte E. Biester says: "The tables in this book give the most recent scientific information concerning the composition of foods. They are very comprehensive, including foods prepared by all the common methods of cooking. Salient points in menu planning are given in a convenient and usable form. Foods rich in the different vitamins and minerals are listed in a table so that this information can be obtained at a glance. The functions of each component of a diet based on the daily allowances recommended by the National Conference for Defense [sic] are concise and readily understood. The essentials of an adequate diet in terms of specific types of food to be used daily to meet those recommendations are given in a simple outline. Charts give all data needed for rapid, accurate, and complete calculating or appraising of diets for all age groups and activities. The greatest change has been in the field of the vitamins, which are given in *units* and *milligrams*; while the mineral values are shown in *shares* and *grams*."

There is a complete bibliography of books and periodicals from which the figures in the tables were taken, bearing date lines up to and through 1941, and the index is apparently quite complete.

Feeding Four on a Dollar a Day. By Marion Jordan Ulmer. Distributed by the author at 591 S. Downing Street, Denver, Colorado. Paper. Pp. 34. Price 50 cents.

The first printing of this booklet, which was described in the Current Comment section of this JOURNAL for August, proved of great interest. The material was dramatized on "Consumer Time" by Consumers' Counsel, U. S. Department of Agriculture, over NBC, and was endorsed, it is said, by various prominent home economists and the OPM, as well as by individual consumers. At the request of the Denver Bureau of Public Welfare the booklet has been printed in braille by the local Red Cross.

In the second printing the author has added some new material on sugar rationing, some recipes for making cleaning supplies and "cosmetics" (including tooth paste and powder and deodorants) at home, and labor-saving and health conservation "tips" for the housewife.

Quantities of *Feeding Four on a Dollar a Day* may be purchased by organizations and nutrition classes at the following rates: $4 per dozen, $8 for 25, $15 for 50, and $28 for 100 copies. Profits go to charity and war projects.

As a postscript to the account of her experiment, Mrs. Ulmer states that she carried out another successful family experiment on feeding five for $1.25 a day (September 1942, six months after the original experiment) and that it required "much more skill, planning, and time to accomplish the trick."

A VICTORY LUNCH

Those attending the recent annual meeting of the National Council of Women in New York were served a "Victory Lunch," the menu for which was prepared by Mrs. Elizabeth Bussing and endorsed by the Nutrition Committee of Greater New York. The meal, described as a "war meal," was prepared with four requirements in mind: to use foods which are plentiful and which are not needed by the Army and the Navy; to feed the family correctly; to ease the load on the family budget; and to prove that a cheap nutritious meal, made up of less familiar foods, can be attractive and appetizing. (The cost of the meal per person as purchased in retail markets in New York on November 18 was 13 cents.)

The items which made up the menu were: Kale Soup, Chili Soy Beans, Cabbage Salad with Wheat Sprouts, Whole Wheat Rolls, Whole Wheat Apple Scallop, and coffee or milk.

The notes regarding the menu, which, together with a food chart were distributed to those present, contained the following information assembled by Dr. Clara Taylor of Teachers College, Columbia University:

Why kale? Freight-car space is needed for troop supplies. Many of the fresh green vegetables to which we are accustomed simply won't be available in usual quantities. Kale is grown in most parts of the country; doesn't need to be shipped. Kale is one of the most inexpensive vegetables, about 8 cents a pound in New York now.

Why soy beans? Meat must be saved for the fighting forces. Soy beans are a meat substitute. Moreover, soy beans give nitrogen to the soil in which they grow. This saves commercial nitrogen for explosives needed by our armed forces. Soy beans have a high protein content. Soy beans can be bought for 8 to 10 cents a pound on the New York market.

Why apples? Apples today are a Victory Special and are produced locally all over the United States. Like all fruits, they give us some of the protective factors. They are economical.

Why wheat sprouts? See above under kale. Grain sprouts are a rich source of vitamin C. Wheat for home sprouting is available at local feed stores for a few cents a pound.

To sprout wheat, it was explained, secure high-grade wheat seed from seedsmen and local grain dealers. The sprouts may be obtained by germinating the wheat on a wire shelf covered with a moist cloth and placed over water in a wide, shallow, covered vessel. At room temperature the sprouts are about one inch long and ready to eat in one week.

By means of a chart it was demonstrated that the luncheon contributed about three-eighths of the calories needed for one day. More than three-fourths of the protein, five-eighths of the calcium, almost the full amounts of iron and vitamin B, and the full amounts of vitamin A, C, and G, plus a generous and desirable surplus of vitamins A and C.

It was suggested that the delegates to the meeting give similar luncheons or dinners in their own localities and that help in planning menus adapted to local food supplies could be obtained from local nutrition committees, the Red Cross, the Department of Agriculture, or the home economics departments of colleges. The ingredients of two dishes served at the Victory Lunch and directions for preparing are given below:

Danish Kale Soup

Potatoes, medium-sized, 4
Milk, 1 qt.
Onions, medium-sized, sliced, 2
Butter *or* fortified margarine, 2 tbsp.
Salt, ½ tsp.
Pepper, dash
Kale, ¼ lb.

Peel potatoes, cook in boiling salted water until tender and put through ricer. Meantime scald milk and onions together in double-boiler for 15 minutes. Strain out onions, add hot potatoes and seasoning. Wash kale and remove stems; put through food chopper using fine knife. Add to soup just before serving. Serve topped with sour cream if desired. Makes 6 servings.

Chili Soy Beans

Soy beans, 1 lb.
Beef, ground, ½ lb.
Onion, diced, 1½ cups
Garlic, minced, 2 cloves
Green pepper, diced, 1
Meat drippings, 2 tbsp.
Salt, 1 tsp.
Tomatoes, cooked, 3½ cups (No. 2½ can)
Chili powder, 1½ to 2 tsp.

Wash soy beans and cover with water and let soak overnight. Add 1 teaspoon salt and additional water to cover and simmer covered 3 hours or until tender. Sauté beef, onion, garlic and green pepper in meat drippings until lightly browned. Add salt and tomatoes, simmer about 30 minutes or until thick. Add chili powder and drained soy beans. Heat well, serve in individual casseroles.

Current Literature

AMERICAN JOURNAL OF DIGESTIVE DISEASES

Vol. 9, November 1942

*Relationship of the hypothalamus to the large bowel. D. Sheehan.—p. 361.

*The relationship between gastric acidity and calcium. F. C. Val Dez and J. Sendroy.—p. 367.

*The acid factor in duodenal ulcer as evaluated by the acidity and neutralizing ability in the duodenal bulb. J. E. Berk, J. E. Thomas and M. E. Rehfuss.—p. 371.

*The amount of fat in the blood after a meal or estimated by counting the chylomicrons. R. R. Cooper and H. Lusk.—p. 395.

Relationship of Hypothalamus to Large Bowel. Observers agree that adequate hypothalamic stimulation is followed by inhibition of peristalsis in the large bowel, as well as in the intestine and stomach. Such effects are more marked in the colon than elsewhere. There are adequate grounds for accepting a sympathetic center regulating gastro-intestinal activity, located in the hypothalamus. The motor responses of the stomach and intestine following stimulation are less definite.

Gastric Acidity and Calcium. Direct relationship of calcium to *p*H in gastric juice has been confirmed in a study of 15 gastric secretion curves, after histamine, of 8 normal human individuals. Results indicate that gastric calcium is lowest at the height of acid secretion and that *p*H as a factor governing calcium content of the gastric juice is merely a reflection of the extent to which parietal HCl secretion is diluted with nonparietal fluids or substances.

Acid Factor in Duodenal Ulcer. Contents of the first part of the duodenum are endowed with considerable capacity to neutralize buffer and dilute gastric chyme which commonly exceeds physiological needs. In normal subjects, the duodenal bulb is an acid area and free acid is not an abnormal finding. In patients with duodenal ulcer the neutralizing ability in the duodenal bulb is impaired but not wholly lost. The acidity of the contents of the duodenal bulb is largely determined by the type of food undergoing digestion and is related only in part to the degree of gastric acidity. The acidity in the stomach and duodenal bulb are not sharply parallel. Oral administration of antacids to patients with duodenal ulcer reduces the acidity of the first part of the duodenum, but the reduction is neither great nor long-lasting and may be followed by a rebound increase. Duodenal bulb neutralization under fasting conditions equals and in some respects surpasses that observed during digestion. The acidity of the contents of the first part of the duodenum is generally insufficient to affect gastric motility significantly, except in duodenal ulcer patients. It may be a factor in stimulating pancreatic secretion.

Disturbed Fat Absorption. Suggestive evidence is presented that the absorption of fat may be disturbed in ulcerative colitis and vomiting of pregnancy and that surgery may tend to correct this absorption in ulcerative colitis.

AMERICAN JOURNAL OF DISEASES OF CHILDREN

Vol. 64, November 1942

*Dietary ratios for the child with diabetes mellitus. R. L. Jackson and J. Kenefish.—p. 807.

*Vitamin D and fluorine: a synergistic relationship? B. R. East.—p. 867.

Diabetes Mellitus. Since the discovery of insulin there has been a gradual transition toward a more normal diet for diabetics. A ratio of fatty acid to dextrose of 1:1.5 has been successfully employed for 9 years. With adequate insulin the children were well stabilized on nutritionally complete diets of the above ratio and appeared to have an almost normal capacity to utilize food.

Vitamin D. It has been shown that resistance to dental caries is increased when children are fed specified amounts of vitamin D. Children reared in communities where the water has a greater amount of fluorine also show greater resistance. The geographic distribution of fluorine and solar vitamin D-producing energy is favorable for the synergistic relationship of the chemical and the vitamin.

AMERICAN JOURNAL OF PHYSIOLOGY

Vol. 137, November 1, 1942

*The influence of antacids upon iron retention by the anemic rat. S. Freeman and A. C. Ivy.—p. 706.

*The effects of a diet deficient in the vitamin B complex on sedentary men. E. Egaña, R. E. Johnson, R. Bloomfield, L. Brouha, A. P. Meiklejohn, J. Whittenberger, R. C. Darling, C. Heath, A. Graybiel and F. Consolazio.—p. 731.

Antacids and Iron Retention in Anemia. Calcium carbonate and aluminum hydroxide definitely reduce iron retention in the anemic rat ingesting 0.25 mg. iron daily. Magnesium trisilicate reduced iron retention somewhat but to a degree that is of questionable significance. Aluminum phosphate did not reduce iron retention. Hence the iron intake needs to be greater in individuals consuming increased amounts of aluminum hydroxide or calcium carbonate than in the normal subject.

Vitamin B Complex Deficiency in Sedentary Men. On a diet deficient in the B complex, all subjects became deficient at least in thiamin within three or four weeks. There was measurable physical deterioration such as easy fatigue, loss of ambition, loss of efficiency and poor recuperation after exercise. All other metabolic measurements showed only slight or no abnormal changes. Cardiovascular changes were inconstant. All changes noted were reversed by the addition of brewers' yeast to the diet. These findings on sedentary subjects are contrasted with rapid and striking effects of vitamin B complex deficiency in men doing hard work.

AMERICAN JOURNAL OF PUBLIC HEALTH AND THE NATION'S HEALTH

Vol. 32, November 1942

*False positive phosphatase test from a thermophil in pasteurized milk. T. C. Buck.—p. 1224.

*Efficacy of standard purification methods in removing poliomyelitis virus from water. H. J. Carlson, G. M. Ridenour and C. F. McKhann.—p. 1256.

False Positive Phosphatase Test in Milk. The milk phosphatase in raw or improperly pasteurized milk is a different substance from bacterial and other phosphatases that may be present in properly pasteurized milk where there has been a growth of nonpathogenic thermophilic organisms. Care is necessary in distinguishing among the phosphatases where the phosphatase test is used in milk control work and where a false positive test due to bacterial phosphatase may lead to misinterpretation of the laboratory findings.

Poliomyelitis in Water. The methods of water purification commonly employed, coagulation and sedimentation, sand filtration, adsorption on activated charcoal, aeration, adjustment of *p*H and storage, have failed when tested individually as a means of eliminating poliomyelitis virus from heavily artificially contaminated water. Ultraviolet irradiation from artificial sources has an effect on the destruction of the virus in water greater than that exerted by direct sunlight, and is more effective in inactivating or destroying virus suspended in water than any single purification method commonly utilized.

AMERICAN JOURNAL OF SURGERY

Vol. 58, November 1942

*Diets in general surgery. B. L. Knowles and G. S. Connick.—p. 181.

Diets in General Surgery. A compilation of the diets more commonly used on the general surgical service of the Massachusetts Memorial Hospitals, Boston, is presented. Included are diet lists and evaluations for spastic colon, a low-residue régime, gastrostomy feedings, formulas for jejunal feeding, Sippy diet, Andrésen's ulcer routine, Meulengracht diet, low-fat diet and reducing régime.

ANNALS OF INTERNAL MEDICINE

Vol. 17, October 1942

*The detection of subclinical scurvy or vitamin C deficiency. J. F. Rinehard and L. D. Greenberg.—p. 672.

*Some physiological observations on the circulation during recovery from vitamin B_1 deficiency. R. R. Porter and R. S. Downs.—p. 645.

Vol. 17, November 1942

*The association of atrophic gastritis with hypothyroidism; a preliminary report of 11 cases. F. C. Golding.—p. 828.

Subclinical Scurvy. Clinically, classical scurvy is uncommon although cases are encountered among infants occasionally and less frequently among adults. The concentration of ascorbic acid in the blood reflects the state of saturation in the body. A concentration in the fasting blood of 0.1 mg. % or below showed marked tissue deficits; this was true in 80% of cases followed. Between 0.1 and 0.3 mg. % there was evidence of a significant deficiency with only mild depletion. General symptoms associated with a low-ascorbic acid content of the blood are: lassitude, fatigability, anorexia, and rheumatic pains. Unpublished observations indicate that subclinical scurvy is commonly encountered in medical practice.

Vitamin B Deficiency. Observations have accumulated in regard to the cardiovascular disturbances accompanying vitamin B_1 deficiency. Two patients recovering from vitamin B_1 deficiency showed increased cardiac output, elevated venous pressure, accelerated circulation and blood volume increase (in one patient). This suggests that one important factor leading to recovery from this type of cardiac failure is contraction of "an abnormally dilated peripheral vascular bed."

Atrophic Gastritis With Hypothyroidism. Anemia and hypochlorhydria are frequently present in patients with hypothyroidism or myxedema. Conclusions from a survey of 11 cases suggest that gastric atrophy and anemia may be a direct result of hypothyroidism or a deficiency of a postulated "gastrotropic hormone."

ARCHIVES OF INTERNAL MEDICINE

Vol. 70, November 1942

*Control by radium for gastric acidity. J. A. Jenkins and M. McGeorge.—p. 714.

*Production and study of cardiac failure in thiamin-deficient pigeons. R. L. Swank and O. Bessey.—p. 763.

Control by Radium for Gastric Acidity. Hyperacidity is recognized as a factor in the causation of duodenal ulcer; most forms of treatment aim at control by chemical neutralization or surgical intervention. Effects of irradiation of the gastric mucosa by radium were studied in 14 cases. Sufficient time has not elapsed to warrant a definite statement regarding the permanence of the reduction in gastric acidity. Seven patients, the youngest in the series, became free of clinical symptoms without the use of alkali. The older group showed improvement when alkali was used intermittently. In 13 of the 14 patients there was a marked reduction in acidity and volume of the gastric juice secreted.

Cardiac Failure in Thiamin-Deficient Pigeons. Although cardiac failure occurs frequently in thiamin-deficient human beings, it is rarely encountered in animals with experimental thiamin deficiency. A long study of forms of thiamin deficiency and the consequences is presented. Chronically deficient pigeons on autopsy were found to have symptoms of cardiac failure, whereas acutely ill pigeons did not. It is concluded that a chronic deficiency of thiamin without starvation will produce signs of cardiac failure in pigeons which is preceded and accompanied by tachycardia and electrocardiographic abnormalities, and that the pigeon responds well to treatment with either thiamin hydrochloride or cocarboxylase.

ARCHIVES OF PEDIATRICS

Vol. 59, November 1942

*Desiccated thyroid in the treatment of low grade chronic illness in children. M. H. Stiles.—p. 740.

*Feeding the newborn high protein, low fat, low carbohydrate mixtures. T. H. Goldman.—p. 756.

Treatment of Chronic Illness. Hypothyroidism is an important factor in chronic or recurrent respiratory and intestinal infections in children. The properly controlled administration of desiccated thyroid often benefits both the thyroid and the infectious symptoms.

Feeding the Newborn. Findings seemed to substantiate the contention that artificially fed infants thrive better on milk formulas higher in protein and lower in fat as compared to standard nursery feedings. A progressive method employed in formula construction is outlined.

BULLETIN OF THE JOHNS HOPKINS HOSPITAL

Vol. 61, November 1942

*Factors influencing the level of vitamin A in the blood of rats. H. Josephs.—p. 253.

*Studies of vitamin A. Influence of vitamin A on serum lipids of normal and deficient rats. H. Josephs.—p. 265.

Vitamin A. Development of vitamin A deficiency was associated with a gradual fall of serum lipids. As the fat depots of the body were depleted the lipids of the liver fell

only slightly. After large doses of vitamin A the serum lipid and serum vitamin A tended to rise above normal levels for a few days before returning to normal. In contrast, when deficient rats were fed large doses of vitamin A the period of increased serum lipid and serum vitamin A was often extended to two weeks. This is of particular interest because of the possible application to determination of vitamin A deficiency in humans.

Vitamin A Blood Level in Rats. Blood serum level of vitamin A seems to be the best means of diagnosis of vitamin A deficiency. It appears that vitamin A of the serum of rats is extraordinarily constant under wide variations of intake. If concentrations of vitamin A in the liver are high, large doses of vitamin A cause a more rapid serum level rise than if those stores are depleted. Rats on deficient diets show a depletion of vitamin A in the liver and blood by the twentieth day after weaning but no signs of deficiency appear for at least a week longer. The changes recognized as late deficiency changes are preceded by those of a metabolic nature.

CANADIAN MEDICAL ASSOCIATION JOURNAL

Vol. 47, November 1942

Reminiscences of the researches which led to the discovery of insulin. C. H. Best.—p. 398.

Lactation in women. M. Gunther.—p. 410.

*Whole liver as an adjuvant to iron in the treatment of hypochromic anemia. R. Gottlieb.—p. 456.

Liver and Iron in Anemia. Chronic anemia of long standing requires more than iron therapy for permanent recovery. Iron and good diet may restore the hemoglobin but the result is not lasting. When a good source of hematogenic materials, such as liver concentrate, is added to iron a rapid recovery ensues. This effectiveness is independent of the diet of the patient. In patients on a poor diet the addition of whole liver to the iron is apparently capable of compensating for shortcomings in the diet. It may be that this combination provides a variety of essential materials in balanced amounts sufficient to restore normal hematopoietic processes.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Vol. 120, December 12, 1942

*Acute protein deficiency (hypoproteinemia) in surgical shock. R. Elman.—p. 1176.

Vol. 120, December 19, 1942

*Beriberi heart in a 4 month old infant (with four year follow-up). H. Rascoff.—p. 1292.

Immunity and protein reserves. Editorials.—p. 1309.

Protein Deficiency. Acute protein deficiency is a decisive but hitherto unemphasized factor in the pathogenesis of surgical shock and other clinical manifestations, shared in common by severe hemorrhage, burns, intestinal obstruction and general peritonitis. Hypoproteinemia confined largely to the albumin fraction is but one aspect of this deficiency, although it may be masked by dehydration. This protein defect in severe cases cannot be corrected rapidly enough by the body and therefore requires prompt and adequate replacement therapy. Because of its protein content, plasma is effective if given early and in large enough amounts. The building stones of protein (amino-acids) offer another way of meeting protein deficiency. This new method of therapy has already been shown to correct chronic hypoproteinemia of nutritional origin; early trials in acute hypoproteinemia have yielded promising results.

Beriberi Heart. A case of beriberi heart in a 4-month-old infant is reported in which the diagnosis was made clinically, and therapeutic response was noted with thiamin hydrochloride. The daily diet of the average young infant is deficient in thiamin hydrochloride and should be supplemented with vitamin B_1. In cases of gastro-intestinal disturbances the vitamin B_1 intake is to be increased. Some cases at present diagnosed as idiopathic cardiac hypertrophy, or deaths attributed to status thymicolymphaticus, may be caused by infantile beriberi.

JOURNAL OF BIOLOGICAL CHEMISTRY

Vol. 145, October 1942

*The influence of insulin upon glycogen storage in the diabetic rat. F. Pauls and D. R. Drury.—p. 481.

*Ketone-sparing effect of glucose. M. Somogyi and T. E. Weichselbaum.—p. 567.

*Effects of glucose feeding upon the ketonemia in healthy men. M. Somogyi.—p. 575.

*On the utilization of acetic acid for cholesterol formation. K. Bloch and D. Rittenberg.—p. 625.

*Conjugated pyridoxine in rice bran concentrates. J. V. Scudi.—p. 637.

Vol. 146, November 1942

*Studies on the hemorrhagic sweet clover disease. C. A. Baumann, B Field, R. S. Overman and K. P. Link.—p. 7.

*Fat metabolism in the lungs. P. L. MacLachlan.—p. 45.

*The inhibition of cholinesterase by physostigmine and prostigmine. G. S. Eadie.—p. 85.

*The quantitative determination of factor V by measurement of nitrite produced by hemophilus influenzae. C. L. Hoagland and S. M. Ward.—p. 115.

*Vitamin interrelationships. B. Sure and Z. W. Ford, Jr.—p. 241.

Glycogen Storage. Insulin administration causes diabetic rats to store large quantities of sugar. There are large increases in glycogen content of the liver and muscles but only 15 and 9% respectively of the stored sugar is accounted for in this way. There is no evidence that any appreciable part of the sugar which is not laid down as glycogen is oxidized. Only a negligible amount could be accounted for by possible protein synthesis. Transient storage as carbohydrate metabolites must be considered. Most ingested carbohydrate is normally stored as fat and it is considered the most likely possibility that this is the fate of the bulk of the sugar stored under the influence of insulin.

Ketone-Sparing Effect of Glucose. Experimental evidence is accumulating to demonstrate that carbohydrates exert a ketone-sparing effect in various extrahepatic tissues and so inhibit the burning of ketone bodies. This sparing effect manifests itself after glucose feeding in an increase of the existing ketonemia of diabetic patients. The rise occurs only in cases in which the ability of the liver to utilize carbohydrates is greatly impaired, so that the liver continues to use fats and hence to produce ketone bodies at nearly the same rate as before glucose feeding. Subtotally depancreatized dogs, whose livers had been rendered very fat by protracted administration of high-fat diets, develop glycosuria and ketosis. Such animals respond to glucose feeding with an increase in ketonemia and ketonuria in the same manner as diabetic men.

Effects of Glucose in Ketonemia. In healthy individuals a measurable decrease of the ketonemic level takes place within 1 to 3 hours after the administration of glucose. This change is attributed to the fat- and protein-sparing effect of carbohydrate in the metabolism of the liver. When alimentary hyperglycemia is followed by hypoglycemia the ketonemic level rises above the postabsorptive level but lags behind the hypoglycemia. The explanation is offered that an increase in the rate of hepatic glycogenolysis entails an increase in the rate of production of ketone bodies, regardless of the nature of the glycogenolytic factor. Thus, spontaneous hypoglycemia, protracted hypoglycemia caused by insulin, fever, adrenalin, anterior pituitary extract, all produce increased ketonemia at the same time that they enhance the rate of glycogenolysis. They fail to increase ketosis if, simultaneously with them, factors are at work which inhibit hepatic glycogenolysis.

Acetic Acid in Cholesterol Formation. The feeding of

Wyandotte

Announcing the consolidation of

MICHIGAN ALKALI COMPANY

THE J. B. FORD COMPANY

into

WYANDOTTE CHEMICALS CORPORATION

Back in the 1890's, two companies were established in Wyandotte, Michigan, by Captain John B. Ford, father of the plate glass industry in America, and an outstanding pioneer in the chemical industry.

The Michigan Alkali Company grew to be one of the great basic chemical companies of the world, manufacturing a wide range of products serving more than fifty different industries.

The J. B. Ford Company developed into the world's largest manufacturer of specialized cleaning materials, and an important factor in promoting sanitation and safeguarding the health of America.

The company controls warehouse facilities strategically located at approximately 200 points throughout the country.

Consolidation a Logical Step

On January 1, 1943, these companies were consolidated, still under the same family ownership, to form the Wyandotte Chemicals Corporation.

This consolidation is a logical recognition of the close relationship which has existed between the companies for many years.

Management and personnel will remain the same, but the consolidation will offer an opportunity for even greater service to our customers.

Many Benefits to Customers

Wyandotte Chemicals Corporation will continue to have one of the best distribution systems in the United States—making all Wyandotte products more readily available, to smaller as well as larger consumers.

Combining the technical staffs of the two companies will now make it possible to bring a wider range of expert technical service to Michigan Alkali and The J. B. Ford customers everywhere.

The enlarged research laboratories may be counted upon to develop important new products to meet the needs of war and post-war conditions.

And by the complete integration of the ownership of raw material sources and control of manufacturing and distribution *in the one company*, Wyandotte Chemicals Corporation will be able still further to enhance the *quality* and *value* for which Wyandotte products have long been noted.

Contracts and commitments of Michigan Alkali Company and The J. B. Ford Company in force at the end of the year 1942 will be carried out without interruption by the Wyandotte Chemicals Corporation, and customer contacts will be maintained without interruption by the Michigan Alkali Division and the J. B. Ford Division of the consolidated sales departments.

It is our sincere intention to continue to develop and manufacture to the best of our ability products which help the nation in wartime and which will contribute to a fuller life when peace is won.

WYANDOTTE CHEMICALS CORPORATION

Michigan Alkali and J. B. Ford Divisions

Wyandotte, Michigan

sodium-deuterio acetate to mice and rats leads to the formation of deuterio cholesterol. The absence of deuterium in fatty acids of animals fed deuterio acetate is additional support for the previously expressed view that fatty acids are not directly involved in cholesterol synthesis.

Pyridoxine in Rice Bran Concentrates. Evidence is presented to show that rice brain contains free pyridoxine and a water-soluble conjugate of low-molecular weight.

Hemorrhagic Sweet Clover Disease. Administration of *l*-ascorbic acid failed to alter hypoprothrombinemia induced in rats or to prolong the lives of rats receiving anticoagulant plus condensed milk or an artificial diet daily. In general the capacity of a compound to promote the excretion of vitamin C paralleled its tendency to counteract the anticoagulant. Anticoagulant alone caused a temporary increase in the excretion of vitamin C by rats maintained on condensed milk. Repeated doses failed to maintain an increased excretion of the vitamin. The ingestion of anticoagulant produced an increase in the concentration of vitamin C in the blood but no significant changes in the content of other tissues.

Fat Metabolism in Lungs. Male, 3-month-old albino mice showed no significant changes from normal in the lipid content of the lungs, either during active absorption of fat from the intestine accompanied by a marked lipemia or during fasting for 1 and 2-day periods, when there were rapid mobilization and utilization of stored fat. These observations do not support the conclusion that the lungs actively participate in fat metabolism.

Cholinesterase Inhibition. Mixtures of cholinesterase with physostigmine or prostigmine reach an equilibrium within a few minutes after being mixed. The inhibition of the enzyme by these drugs is competitive.

Factor V. Ingestion of nicotinic acid produced an immediate rise in V factor concentration in the blood of normal individuals. Nicotinamide, on the other hand, ingested in equivalent quantities, produced no appreciable change in the concentration of V factor in the blood. This suggests the possibility of separate metabolic pathways for nicotinic acid and nicotinamide.

Vitamin Interrelationships. In thiamin deficiency there is pronounced disturbance in riboflavin metabolism, mainly because of poor absorption. However, in riboflavin deficiency there is no disturbance in thiamin metabolism.

JOURNAL OF CLINICAL INVESTIGATION

Vol. 21, November 1942

*The classification and chemical pathogeneses of urinary calculi. J. F. McIntosh.—p. 755.

Urinary Calculi. Diet and intermediary metabolism are considered in relation to each type of stone. A comprehensive review.

JOURNAL OF NUTRITION

Vol. 24, November 1942

*The influence of thiamine, riboflavin, pyridoxine, and pantothenic acid deficiencies on nitrogen metabolism. B. Sure and Z. W. Ford, Jr.—p. 405.

*Inhibition of the symbiotic synthesis of B complex factors by sulfonamides. R. F. Light, L. J. Cracas, C. T. Olcott and C. N. Frey.—p. 427.

*Potassium, sodium, and chlorine balances of pre-school children receiving medium and high protein diets. J. E. Hawks, M. M. Bray, S. Hartt, M. B. Whittemore and M. Dye.—p. 437.

*The riboflavin requirement of the dog. R. L. Potter, A. E. Axelrod and C. A. Elvehjem.—p. 449.

*Metabolism and growth rate of rats. H. H. Kibler and S. Brody.—p. 461.

*Effects of prolonged daily treatment of normal rats with saline anterior pituitary extract. I. L. Voris, M. Kriss, L. F. Marcy and R. S. Bowman. —. p. 469.

*Effects of prolonged daily treatment of normal rats with saline anterior pituitary extract. II. L. Voris, M. Kriss, L. F. Marcy and R. S. Bowman. —. 481.

*The effect of vitamin B deficiency on the intestinal absorption of galactose in the rat. A. H. Free and J. R. Leonards.—p. 495.

Vitamin Deficiencies and Nitrogen Metabolism. In thiamin deficiency there are large excretions of ammonia, creatine, and preformed creatinine in the urine. No definite relationship between creatine elimination and body weight was demonstrated in this avitaminosis. There is a great increase of total nonprotein nitrogen and urea in the blood even in mild chronic states of thiamin deficiency. In advanced stages of riboflavin deficiency there are large excretions of ammonia in the urine, a moderate creatinuria and a small reduction in allantoin excretion. Changes in body weight were taken into consideration. In mild states of pyridoxine deficiency slight creatinuria, reduction in urinary uric acid and marked retention of creatine and blood uric acid are apparent. In pantothenic acid deficiency there is moderate creatinuria, and a small reduction in allantoin excretion. Increase in total nonprotein nitrogen and urea of the blood were noted in the terminal stages.

Sulfonamides and B Complex Factors. Inclusion of 0.5% sulfaguanidine in the diet of rats fed available crystalline factors of the B complex results in depressed growth which can be counteracted by feeding such natural sources of the B complex as yeast and yeast extract or by feeding the feces of rats kept on the same diet without sulfaguanidine. These findings indicate that sulfaguanidine inhibits the bacterial synthesis of essential factors which are present in the natural B complex.

Potassium, Sodium and Chlorine Balances of Children. Amounts of potassium, sodium and chlorine stored by 5 preschool children on constant diets including 3 then 4 gm. protein per kg., were similar to estimated daily accretions and values of other investigators. The 4 gm. protein diet produced little, if any change in potassium retentions of some children and slight increase in others. It resulted in slightly higher sodium and distinctly higher chlorine retentions for all children. The facts suggest that an increase in protein without an increase in minerals did not cause so much muscle production as an increase in both protein and minerals and that potassium may be a limiting factor in muscle growth. Increased chlorine retentions on the higher protein diets suggested that specific types of tissue may have been produced at that time.

Riboflavin Requirement. The riboflavin requirement of the growing dog lies between 60 and 100 mg. per kg. body weight per day. The isocaloric substitution of lard for sucrose does not increase the riboflavin requirement. Fatty liver, dermatitis, muscular weakness of the hind quarters, conjunctivitis, vascularization of the cornea, corneal opacities and tachycardia are associated with riboflavin deficiency.

Metabolism and Growth Rate. The metabolic rate rises from 550 calories per square meter per day in early infancy of the rat to 1100 basal or 1200 nonbasal at the age of 45 days or at a body weight of 100 gm.; thereafter it declines to 800 basal and 850 nonbasal, the decline in metabolic rate tending to parallel the decline in percentage growth rate. This decline is more rapid in females than in males.

Pituitary Effects—Sexual Differences. In male rats treated daily with 1% saline extract of bovine anterior pituitary lobes there was no specific growth stimulation, independent of food intake. An initial appetite-stimulating effect, which gradually disappeared and was finally reversed, accounted for the extra weight gains of treated male rats fed *ad libitum*. In female rats, appetite and growth were stimulated independently. Treated female rats showed extra gain in weight after fifth week of treatment, while those fed *ad libitum* grew at the same rate as normal untreated male rats. Liver weights of treated rats of both sexes were less than those of controls, on basis of equal body weight. Weights of adrenals and thyroids in treated male rats were larger than those of controls. This was not evident in female rats. The effect on the adrenals appeared to be a true enlargement but the difference in the thyroid

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BLOOD AGAR TEST — To assure absence of hemolytic streptococci

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SANITARY CONTROL OF DEXTRI-MALTOSE - (NO. 5 OF A SERIES) - MEAD JOHNSON & CO., EVANSVILLE, IND., U.S.A.

weight resulted from a decrease in the weight of these glands in the control rats.

Pituitary Effects—Energy Metabolism. Anterior pituitary extract appeared to act as a specific stimulant of cellular metabolism and, at the same time, was effective in promoting an increase in body substance which was less energetic than that assimilated normally. In male rats an agent developed which was antagonistic to both of the foregoing effects.

Intestinal Absorption in Rats. The rate of intestinal absorption of control rats, determined by analysis of unabsorbed sugar in gastro-intestinal tract 1 hour after oral ingestion, averaged 35% more than that of animals deficient in the vitamin B complex. Results were not affected by the rate of gastric emptying. Blood galactose levels also indicated an impairment of intestinal absorption in vitamin B complex-deficient animals.

JOURNAL OF PEDIATRICS

Vol. 21, November 1942

A series of substitutes for milk in the treatment of allergies. L. Z. Wolpe and P. C. Silverstone.—p. 635.

*The blood level of vitamin B_1 in healthy children and its relation to the urinary thiamine. R. A. Benson, C. M. Witzberger, L. B. Slobody and L. Lewis.—p. 659.

Vitamin B_1 and Urinary Thiamin. In 177 determinations on 45 healthy children, the blood level of vitamin B_1 ranged from 4.8 to 12.3 μg. with a mean of 7.8 $\pm$ 1.3 μg. Daily variations in blood vitamin B_1 in an individual did not follow daily urinary thiamin outputs. Height of the vitamin B_1 blood level had no relationship to amount of thiamin excreted or to percentage of dietary thiamin excreted in the urine.

LANCET

Vol. 2, November 7, 1942

*Vitamin C nutrition in the Royal Navy and in a section of the civilian population during war-time. G. Z. L. McNee and J. Reid.—p. 538.

Trace elements in relation to health. Proceedings of the eighth scientific meeting at the London School of Hygiene.—p. 544.

Vitamin C Nutrition. It was impossible to associate bleeding gums with vitamin C deficiency. Good oral hygiene was of major importance in maintaining the health of teeth and gums. Capillary resistance tests were of no value. It is suggested that in adults, at least, vitamin C is mainly concerned with tissue repair and that in health and ordinary circumstances of service and work the maintenance requirements of this vitamin are small but have not been accurately determined. No outbreak of scurvy is likely to occur provided the present standard of diet is maintained.

SCIENCE

Vol. 96, November 6, 1942

*Vitamin C content of persimmon leaves and fruits. C. G. Vinson and F. B. Cross.—p. 430.

*The effect of vitamin E on the blood plasma lipids of the chick. H. Dom and E. Kelman.—p. 430.

Vol. 96, November 27, 1942

*Hay fever and vitamin C. H. N. Holmes and W. Alexander.—p. 497.

Vitamin C in Persimmons. Persimmon leaves are exceptionally rich in vitamin C, having about ten times the concentration of the fruit. A tea made from green leaves was very acceptable, resembling sassafras tea in flavor and much like ordinary tea in color.

Vitamin E and Blood Plasma Lipids. Since vitamin E and lipocaic apparently can bring about the same change of the blood plasma lipids it is likely that the vitamin E-deficient chick is lacking in the active principle of lipocaic which would mean that the formation of this substance in the body of the chick depends upon the presence of vitamin E in the diet.

Hay Fever and Vitamin C. During the past four years observations were made indicating a lowering of the body level of vitamin C during hay fever attacks. Losses should be made good by a diet extremely rich in this vitamin or by the administration of the synthetic product in severe attacks. Of the cases studied, 88% showed distinct improvement after vitamin C therapy.

SOUTHERN MEDICAL JOURNAL

Vol. 35, November 1942

*Control of pellagra. W. DeKleine.—p. 992.

Control of Pellagra. The 1940 death rate from pellagra is 77% below the 1928 rate, which is the highest on record. Widespread use of brewers' yeast, promotion of gardening, introduction of nicotinic acid, and educational work have been largely responsible for this reduction. The 1933 federal relief program has not materially influenced the pellagra death rate, although no doubt it has prevented serious problems of malnutrition. Niacin became available to the medical profession in 1938 and has contributed to a lower pellagra mortality since that time. However, it cannot be distributed by public health agencies for use by the masses as can be done safely with brewers' yeast. Advanced pellagra is rare but subclinical types are still common. The problem cannot be brought under complete control until an adequate diet is within reach of all potential victims.

AMERICAN RESTAURANT MAGAZINE

Vol. 26, November 1942

*Food supplies under wartime conditions. S. J. Sexton.—p. 31.

*Consider the oyster. Horwath and Horwath.—p. 33.

*You'll need a ceiling on portions too!—p. 34.

*Meat industry sponsors "share the meat" program.—p. 42.

*Coffee maker free of war materials.—p. 46.

*New hot cereal discovery.—p. 46.

*How the commons at the University of Texas helps students form good eating habits. K. Ebert.—p. 56.

Wartime Food Supplies. Although the restaurant industry is doing well at present, conditions with regard to food supplies are changing rapidly. Sherman Sexton feels that the restaurant association should raise a vigorous protest against the WPB order restricting shipments of canned goods for civilians at 35% of production to December 1, and additional 35% to April 1 and 30% thereafter. This allotment is not sufficient to provide balanced meals through the winter season. Unless sufficient labor is supplied to harvest food supplies which now lie untouched, an acute food shortage may result. Mr. Sexton suggests that a legion of 50,000 men capable of working but not accepted in armed services be formed into an agricultural army to start sowing, harvesting, packing and canning Florida crops and work north with the season to the wheat fields of North Dakota. Likewise a similar group in the West would proceed from the Rio Grande Valley north along the Pacific coast. Even with such an army the American diet will become simpler and food rationing will become all-inclusive.

Oysters. With less meat available oysters offer a profitable and nutritional food, served as an appetizer, or in soup, sandwich, or for main course. One pint will supply one-half the phosphorus, one-third the calcium, and all the iron and iodine for the average person daily. Vitamins A, B, C, D and G are also contained in appreciable quantities.

Portions. Servings standardized by scoop and served in paper cups afford an attractive yet labor-saving device by

Brer Rabbit New Orleans Molasses is second only to liver as a food source of available iron

TABLE[1]

	Total iron mg/100 gm	Per cent availability	Available iron mg/100 gm
MOLASSES "A"*	3.2	97	3.1
MOLASSES "B"**	6.0	85	5.1
BEEF LIVER	8.2	70	5.7
OATMEAL	4.8	96	4.6
APRICOTS (dry)	4.1	98	4.0
EGGS	3.1	100	3.1
WHEAT	5.0	47	2.4
RAISINS (Muscat)	3.0	62	1.9
PARSLEY	3.2	50	1.6
BEEF MUSCLE	3.0	50	1.5
OYSTERS	5.8	22	1.3
CABBAGE	1.8	72	1.3
MUTTON	5.1	24	1.2
LETTUCE	1.5	63	0.9
SPINACH	2.6	20	0.5

*Brer Rabbit Molasses—Gold Label (light, mild flavored)

**Brer Rabbit Molasses—Green Label (dark, full flavored)

1. Am. J. Dig. Dis. Vol. VI No. 7 (Sept.) pp. 459-62, 1939

. . . supplement the diet with delicious BRER RABBIT MILK SHAKE*—*It's rich in both!*

Brer Rabbit Milk Shake* is one of the few ways in which patients may enjoy their needed daily amounts of iron contained in molasses as well as the calcium, vitamins and other beneficial properties contained in milk.

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Three tablespoons of Green Label Brer Rabbit Molasses, added daily to the diet, supply 3 mg. of *available* iron. Or the amount may be increased at the direction of the physician. Penick & Ford, Ltd., Inc., New Orleans, La.

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There is 1 full mg. of available iron in every tablespoonful of Green Label Brer Rabbit New Orleans Molasses.

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eliminating extra vegetable and salad plates, and can be dished ahead of serving time. For buffet service, this eliminates waste and dish breakage when customers carry their own dishes. Adequate portions and cost control can be maintained even with inexperienced, untrained workers by using containers of fixed quantity.

"Share-the-Meat." Nine rules issued by the American Meat Institute to help consumers share-the-meat include planning meals ahead, knowing meat cuts, storing meat safely, cooking meat properly, using every bit of the meat, being thrifty with leftovers, stretching the meat flavor, getting all the meat information possible and trying new meats and new cuts.

Glass Coffeemaker. A new glass drip coffeemaker, the "Speed-Stir," eliminates the use of metal and rubber parts. It filters 8 cups in less than 5 minutes by using a filter cloth which removes all sediment from the coffee.

Instant Hot Cereal. Individually packed portions of "Instant Oatmeal" and "Instant Ralston Whole Wheat Cereal" can now be combined with boiling water and served fresh to each customer.

Student Eating Habits. School lunchrooms and cafeterias throughout the country are serving as centers for teaching proper food selection to the students and the community. The first aim of Miss Janzen, Director of Commons, University of Texas, is high food standards. Quality and freshness in buying and receiving all foods, adequate storage and refrigeration facilities, and scientific preparation of food in clean modern kitchen are keynotes to her success. Price ranges on salads are from 5 to 8¢; on poultry, fish and meats 8¢ and up; soup 5¢ per bowl, vegetables 3 to 5¢; fresh fruits and desserts 5¢; beverages 5¢, except milk which is 3¢. A complete well-balanced "special" meal is served for 25¢; nutrition charts are posted and food rating score cards are available for individual student rating.

BAKERS' HELPER

Vol. 78, November 7, 1942

*Federal trade commission investigates bread. W. Werble.—p. 25.
*Report of resolutions committee at bakers' war conference.—p. 26.
*Packaging puzzles wholesale cake bakers.—p. 38.
Pie bakers carrying on nutrition survey.—p. 39.

Bread. Federal Trade Commission is conducting an investigation of the bread-baking industry, the results of which will be used to help settle the wheat-flour-bread price problem. Retail margins must remain the same by effecting certain economies. A permanent regulation will be issued fixing flour prices at the average of the individual ceilings now prevailing under the temporary ceiling. Farm bloc proposes a plan which, if put into effect, would mean an increase in bread prices from which bakers would not benefit. Bakers expect a government order setting aside enough spray-process dried whole and skim milk to meet military and Lend-Lease needs. The one-delivery-per-day provision of ODT prohibits a customer from sending his truck to the seller after the seller's truck has made its one stop for that day at the customer's door. WPB has partially revised its order controlling flow of fats and oils into shortenings and other edible products.

Report of Resolutions Committee. The following resolutions were approved at Bakers' War Conference: The food value of bread must and will be maintained. This industry will not make demands to further selfish interests, preserve prerogatives, or maintain business as usual. Cellophane should be eliminated in packaging bakery goods. Unnecessary use of wax paper, use of more than two colors in printing wrappers, and twisting and cross-panning of bread should be discontinued. Slicing should continue. No recommendation is made concerning stale returns.

Cake Packaging. The Wholesale Cake Branch is having a survey made to determine the nutritive value of cake to prove essentiality. It was suggested that experiments be made in the use of oil as a substitute for shortening and that varieties requiring scarce materials be eliminated. Because of shortage of all wrapping materials, bakers should determine some way of changing size, shape, etc., of packages so that less wrapping would suffice. The problem of stale returns is solving itself because of the small percentage of returns at present.

BUILDINGS AND BUILDING MANAGEMENT

Vol. 42, November 1942

*Steam for Manhattan.—p. 36.
*National association notes. R. B. Beach.—p. 42.

Steam. During the first 9 months of 1942 the fuel oil shortage has caused more than 200 structures in Manhattan to convert to the use of steam furnished by the New York Steam Corporation, which has been dispensing piped heat for Manhattan's buildings for 63 years and now serves more than 2000 buildings. This central source is estimated to save about 767,616 barrels of oil and 16,477 tons of coal formerly going into private heating plants.

Air-raid Equipment. All future orders for dim-out fixtures, alarm systems, and fire extinguishers must be cleared through a new agency, the Resources Protection Board.

FOOD INDUSTRIES

Vol. 14, November 1942

*Army feeding will affect foods of the future. R. A. Isker.—p. 41.
*Tunnel dehydraters and their use in vegetable dehydration. W. B. Van Arsdel.—p. 47.
*Simple tests reveal improper blanching. B. E. Proctor.—p. 51.
*Army standards for dehydrated foods.—p. 54.
*Improved processing helps to accomplish wartime food job. H. E. Drews.—p. 60.
*Asphalt seal makes fiber box watertight. S. M. Jackson.—p. 62.
*Glass containers standardized.—p. 64.
*Brief summaries of grade standards.—p. 66.
*Box substitutes for tin.—p. 69.
*Dehydrated chicken dinner.—p. 69.
*New use for paper bags.—p. 69.
*High-protein milk.—p. 69.
*Come and get it.—p. 69.
*FRC sets goals for winter vegetables.—p. 71.
*There will be enough cans.—p. 71.
*Standards for frozen snap beans issued.—p. 72.
*U. S. wants more frozen foods.—p. 72.
*Freezing before packing to aid peach canners.—p. 72.
*Poultry industry gears for job.—p. 74.
*Meat packers study outlook.—p. 74.
*Canned foods quotas fixed.—p. 77.
*Canned foods will be scarce.—p. 79.
*Indicators.—p. 81.
*Baking.—p. 107.
*Dextrins.—p. 107.
*Starch in crude gluten.—p. 107.
*Whey products.—p. 108.
*Freshening salted fish.—p. 108.
*Vitamin retention in green snap beans.—p. 109.
*Chemical changes in tenderizing beef.—p. 110.
*Egg powder quality.—p. 110.

Foods of Future. New food products and many old ones in new forms by means of concentration, dehydration, compression, new combinations or prepared mixes are being prepared to meet the requirements of the Army. Some of the products such as boneless frozen meat, canned ham and eggs, dried skim milk and dehydrated soups will probably be produced after the war.

Tunnel Dehydraters. The physical and engineering fundamentals underlying the operation of a tunnel dryer are given, along with a summary of results of actual drying runs, some of which show that while initial drying rates may differ, times to reach final dryness are much alike;

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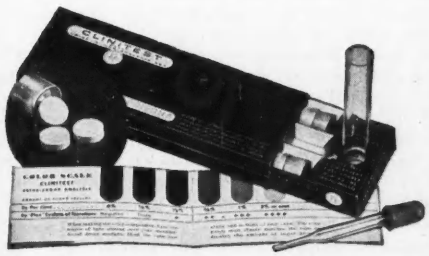

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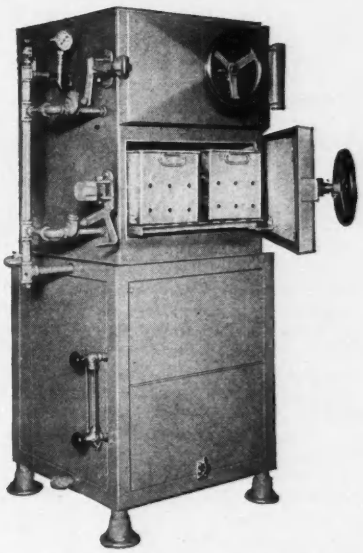

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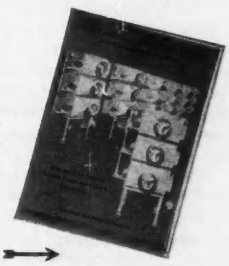

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Everett Station ***Boston, Mass.***

larger surfaces dry faster; drying increases as does the velocity of air flowing across the tray; higher temperatures and greater wet bulb depressions cause faster drying provided hardening does not result, and total drying increases rapidly as final moisture content reaches equilibrium value.

Blanching. Producers of dehydrated foods should test their blanching process so as to ensure good storage qualities for the product and to be certain that the government inspection will be passed. The catalase test, using hydrogen peroxide, is the best for carrots while the peroxidase tests, using guaiacol or benzidine, are the best for other food products.

Army Standards. General specifications for inspection tests and packaging include specific requirements as to preparation, blanching, and dehydration and rehydration standards.

Processing. Despite war conditions, many advances have been made in poultry processing. Shock cooling, a quick, practical method of cooling poultry by using a spray of brine from 24° to 32°F. over poultry hung in a regular manner on racks, has made possible the packing of poultry for commercial shipment on the same day it is killed. Evisceration of poultry is now carried on with a minimum of two conveyor-type steel tables with automatic cleaning, washing, and sterilizing of conveyor pans during the operation. A substitute for the stainless steel pans, used for all surfaces of eviscerating equipment that comes in contact with the birds during the process, is a galvanized pan coated with a proper baked enamel of the synthetic resin type.

Watertight Boxes. The "Aqua-Proof" Pack, perfected by the Loose-Wiles Biscuit Company, is watertight and uses no material vital for war defense. First the food is wrapped in glassine-lined cardboard cartons sealed against moisture by a double wrapping of transparent, bleached, waxed sulfite paper. Twelve of the 2-lb. cartons are packed in a container of weatherproof fiberboard of .09″ caliper. A layer of .018″ caliper newslined chipboard is fitted inside top and bottom of each fiberboard container to prevent contact of the asphalt with the wax-wrapped cartons. Fiberboard is scaled in a large container of same material, sealed with asphalt and steel-strapped.

Glass Containers. Twenty-eight standard types and sizes of food bottles, jars and jugs have been designated by WPB. Packers are urged to use only these sizes as soon as possible because their use will soon be compulsory.

Grade Standards. Grades, sizes, definition of terms, and methods of grading and scoring are given for frozen Lima beans and broccoli, and dried apricots.

Tin Substitutes. Corrugated packages in 1, 1½, 2 and 3-lb. sizes are being used instead of tin boxes by the Hoenshel Fine Foods Company for marketing cakes and puddings.

Chicken Dinner. A dehydrated chicken dinner ("Chicken Shack Dinner Mix") contains pure egg noodles, chicken fat, cereal flour, dry skim milk, salt, dehydrated vegetables, artificial flavor and tumeric. The noodles are packaged and cooked separately.

Paper Bags. Fifty-pound multiwall paper bags developed especially for sweet potatoes are very effective, not one bag having been broken in a recent shipment of 250 bags.

Milk. Canned, dried milk, high in protein, but low in fat and lactose, is recommended for infant and convalescent feeding.

Ham and Eggs. A nutritious and appetizing canned chopped ham and egg breakfast is being offered by the H. J. Heinz Company.

Vegetables. Goals for 1943 vegetable crops have been set by FRC to increase output of those most valuable for war needs and to reduce yield of those less essential.

Cans for Vegetables. WPB assures enough cans for the 1943 packs of canned beets, carrots and spinach.

Frozen Snap Beans Standards. AMA has issued tentative standards for grades of frozen snap beans and has announced revision of standards for grades of dried apples.

Frozen Food Priorities. Because of the great demand for its products, the frozen food industry is assured of high priorities for maintenance and repair requirements and the government may take steps to expand production capacity. The total amount of frozen vegetables for Army, Navy, and other armed services for 1943 is estimated to be 70.9 million lb., most of which will be used in the United States so as to release canned goods for shipment abroad.

Peach Canning. A method of putting peaches into freezing storage from which canners are able to use them as needed avoids heavy peak loads on the cannery and eliminates some of the spoilage.

Poultry. At the thirty-sixth annual meeting of the National Poultry, Butter and Egg Association, advice on ways and means of coping with existing problems was to continue operation with equipment on hand, to ration flow to market as much as possible, to use second-shift operating crews where available, to add, when possible, new or additional operating units, and to make additions to plant when feasible.

Meat Packers. Labor supplies and rationing plans were points of greatest interest at the annual meeting of the American Meat Institute. Although the total 1942 meat production will be about 16% higher than during 1941, civilian consumption per capita will drop from 143 lb. to about 137 lb. while the government purchase will be about 30% of the total production of 7,000,000,000 lb. Labor and materials needed for this large production are decidedly short. Steel needed to put the industry on a maximum efficiency basis is unobtainable at present but may be obtained later. Skilled labor supplies are short in many places for more than 1 shift per day operation.

Canned Food Quotas. WPB Conservation Order M-237 places quotas on canners' deliveries of certain foods after military and Lend-Lease requirements are met. The restriction does not apply to jellies, jams, marmalades, preserves, pickles, relishes, soups or packed foods for infants and invalids.

Canned Food Scarcity. Because labor shortage, winter weather, and lack of facilities caused output of canned food to fall short of requirements, supply for civilian use will be subnormal. Canned vegetables are low, meat and fish supplies are very low and fruit supplies are low except for peaches and canned citrus fruits.

Food Production. Green Lima bean production for September was about 1000 tons below production for August. Beet production for canning was 28,250 tons less than last year. Of the total salmon pack, 5,780,000 cases, 3,468,000 are held for the government, 1,156,000 are released for civilian use and 1,156,000 are being held until further notice. Oleomargarine sales for 1942 were less than a year ago. Frozen egg production decreased, while dried egg production increased 771% over last year. Frozen fruit and vegetable production is slightly more than last year. Butter in storage is 76,963,000 lb. less than last year.

Vitamin B. Bread made with whole wheat flour, white flour enriched with high vitamin yeast and white flour enriched with synthetic thiamin yeast loses about 21 to 23% of its thiamin value when baked in commercial ovens.

Dextrins. Amount of dextrins present in bread influences the character of the crumb in the finished bread.

Starch. The need for sharp differentiation between starch and protein and improved starch dispersion is met by a new polarimetric method of evaluating washing procedures used in separating wheat starch from gluten.

Whey. Whey in whole form can be converted into certain types of whey cheese; in condensed form can be used in confectionery; in light condensed form can be used for soups, and in protein form, after lactose is recovered, can

BUY WAR BONDS AND STAMPS

"...And you will have four beautiful children"

For once, the fortune teller is probably right. She has on her side the strong fact that healthy children usually grow into healthy parents, and that healthy parents usually have healthy children.

America's children grow stronger and more healthy each successive generation.

This is a pleasant and encouraging vital statistic. One good reason for it is that each year America's scientists learn more about food — its properties, its possibilities, and its meaning in the life of an individual and in the progress of a people.

National Dairy Research is constantly adding to the fund of existing knowledge about one of the great basic human foods . . . milk, and milk products. The entire National Dairy organization is devoted to the translating of this knowledge into better methods of producing, processing and distributing milk for millions of people in many cities in the land.

By a system of precise and far-reaching *quality control*, National Dairy sets standards of purity and nutritive value. . . . By helping to make milk and its products better, more abundant and more available, National Dairy is also helping to strengthen the life-lines of the nation.

Dedicated to the wider use and better understanding of milk as a human food . . . as a base for the development of new products and materials . . . as a source of health and enduring progress on the farm and in the towns and cities of America.

NATIONAL DAIRY
PRODUCTS CORPORATION
AND AFFILIATED COMPANIES

Originators of the Sealtest System of Laboratory Protection

be used for whipping. The chief disadvantage is that it has a salty flavor which can be modified by processing or masking with other flavors.

Salted Fish. Salt fish can be freshened and made edible by washing with a sulfite or bisulfite to prevent putrefaction during washing period. P-hydroxy benzoic acid may be used to prevent mold formation. The fish is then fresh in appearance, taste and quality.

Green Bean Vitamins. Tests show that vitamins B_1, B_2, and C are best retained when green snap beans are blanched in boiling water 2 minutes and then quickly frozen. Comparison of vitamin retention in frozen, canned and dried beans shows that vitamin B_2 possesses good stability to freezing, canning, drying and storage, while vitamins B_1 and C are not retained well in canning and dehydration completely destroys the vitamin C although loss of vitamins B_1 and B_2 is small.

Tenderized Beef. At time of consumption, more vitamin C is contained in beef which has aged under ultraviolet radiation for 48 hr. at 60°F. instead of at a low temperature for 30 days.

Egg Powder. The quality of dried egg powder can be successfully determined by fluorescent testing.

HORWATH HOTEL ACCOUNTANT

Vol. 22, November 1942

*War-time food costs and menus. H. W. Espersen.—p. 4.

Wartime Food Costs and Menus. Selling prices must be made to compensate for rising costs if a restaurant is to operate at a reasonable profit. Detailed knowledge of portion cost of every menu item is necessary to price the menu correctly. Possible methods include retaining the menu and raising the selling prices, but the public senses this quickly and rebels; charging extra for the first course with the same price for the rest of the meal, but the public is apt to ignore the appetizer entirely; charging extra for the first course and the dessert and reducing listed price slightly, which meets with more general favor because lower entrée price has a psychologically good effect and this method allows the customer to make a greater choice in meal composition, also 60% of patrons will take dessert which costs less per dollar sale; and finally, charging extra for all except the entrée, vegetable and bread.

HOSPITAL MANAGEMENT

Vol. 54, November 1942

*Hospitals occupy strategic place in national nutrition program. F. MacKinnon.—p. 63.
Study American pickle extracts.—p. 66.
Reviews developments in food technology.—p. 66.
Urges simplification of list of vitamins.—p. 66.
*Almonds, "manna" for Americans, are valued asset to dietary. I. M. Lucas.—p. 68.

National Nutrition Program. When the personnel is conscious of its opportunity, a well-run hospital is a powerful teaching force in any community. The hospital dietitian plays an important role in the National Nutrition Program. She has had an excellent background in science and the opportunity to put this into practice during her year's internship. Her work in the hospital provides an opportunity to teach, by practice and precept, patients of all types. By working with local committees she can do much to bring about good nutrition.

Almonds. Investigators have found that almonds contain more than 21% protein of high biological value. In addition they contain appreciable amounts of fat, iron, calcium, phosphorus, copper, vitamins A, B_1, G, E, pyridoxine, niacin, biotin and choline. The threatened shortage of protein foods and the fact that almonds are grown within our own country, in abundant quantities and sold at a reasonable cost, should induce us to include them in our diet.

HOSPITALS

Vol. 16, December 1942

*Price trend of hospital commodities.—p. 57.
*Meat rationing and hospitals.—p. 80.

Price Trend of Hospital Commodities. The underlying trend of grocery prices in the next year will be slowly yet definitely upward due to the change in type and quantity of foodstuffs available, shortage of farm labor, and difficulties in transportation of fresh produce. Increased per capita consumption of eggs, government needs, and Lend-Lease shipments will no doubt exceed the supply in the coming year.

Meat Rationing and Hospitals. Rationing of fresh meats, beef, pork, mutton, and veal will not greatly affect hospitals provided they establish their minimum requirements. Fowl, fish, and salt meats have not as yet been included in the rationing program. Mr. John J. Madigan, chief of the Meat Branch of the Food Rationing Division, feels certain that essential institutions will receive their full share by cooperation with the meat packers and slaughterers.

HOTEL MANAGEMENT

Vol. 42, November 1942

*Maintenance of heating plants for wartime economy. F. D. Mosher.—p. 22.
*What's new.—p. 48.

Maintenance of Heating Plants. Proper maintenance of heating plant is essential to efficient fuel-burning and economy. The plant must be cleaned before a complete inspection can be made. All soot and ash should be removed and air leakage checked. Good insulation is an important factor in fuel conservation. Hot water tanks should be cleaned frequently and protected from bad water and higher temperatures than necessary.

What's New. The American Fruit Growers, Inc., are offering a buying guide for fresh fruits and vegetables. Hotel Research Laboratories, Inc., New York, has devised a means of conserving tin and steel as well as alcohol used for room service to keep food hot in carriers. Alexander Smith and Sons Carpet Company, New York, has announced a new carpet, "Duration," combining wool and rayon. Stonhard Company, Philadelphia, has announced a resurfacing material for concrete floors that will do a satisfactory repair job in a few hours. Sanymetal Products Company, Inc., Cleveland, is making all-wood toilet compartments as temporary substitutes for steel. Bigelow-Sanford Carpet Company, New York, has developed "Main-teen" which not only cleans, but extends the life of the carpets. Serta Associates, Inc., Chicago, has shown new "Four A Model Serta Tuftless" mattresses and box springs using noncritical materials. Holley Chemical Company, New York, has issued a folder describing "Ridsmel," a paint deodorant. Vogel-Peterson Company, Chicago, has made all-wood wardrobe racks to substitute for steel ones. Reynolds Electric Company, New York, offers "Reco" color hoods for covering interior lights during blackouts.

HOTEL MONTHLY

Vol. 50, November 1942

*Life begins at 50.—p. 19.
*Short cuts in banquet service.—p. 30.
*Convert kitchen waste into rabbit meat.—p. 32.
*America's first snack shop.—p. 33.
*For a voluntary share-the-meat program.—p. 48.

Labor Shortage. The Sherman Hotel had an overwhelming response to an advertisement for employees over 50 and is now employing many of the applicants. It has been found that employees over 50 are very capable in many

THE AMERICAN DIETETIC ASSOCIATION

AVAILABLE REPRINTS

Between-meal feeding in industry: Effects on the absenteeism and attitude of clerical employees. Howard W. Haggard, M.D., and Leon A. Greenberg..... $.10

Cafeteria, The pay. Mary M. Harrington. 1941..... .10

Cafeteria, The pay. Mary M. Harrington. 1940..... .10

Community health education. Vivian V. Drenckhahn. 1938..... .10

Dairy products in the low-cost adequate diets: The economy of combinations of. Aubyn Chinn and Grace Gustafson. 1941..... .10

Diet and aging. C. M. McCay. 1941..... .10

Dietary department, Administration of the. Mary M. Harrington. 1940..... .10

Dietary departments, small hospitals, Monthly cost report. Lois Sturmer. 1939..... .10

Dietary intake, The estimation of the patient's home. Dorothea Turner. 1940..... .10

Dietetics, Early. Sarah Tyson Rorer. 1934..... .25

Dietitian, The, and industrial feeding. Frances B. Floore. 1942..... .10

Dietitian, The, in government service. Nell Wickcliffe and Frances H. Boykin. 1940..... .10

Dietitian, The, in the World War. Mary P. Huddleson. 1940..... .10

Dietitians, hospital, Training. Warren P. Morrill, M.D. 1940..... .10

Equipment, fabricated, Some considerations in the selection of, for the institution kitchen. Katharine W. Harris. 1939..... .10

Food service equipment, Fundamentals in the design of. Owen T. Webber. 1940..... .10

Foods, Classification of, and factors for conversion of their packaging units to pounds. Colonel Paul Howe, Lt. Claud S. Pritchett, and Lt. George H. Berryman.. .10

Labor, good, Maintaining, standards in the hotel and restaurant industry. Marian L. Mel. 1937..... .15

Labor policies in college residence and dining halls. Grace M. Augustine. 1939..... .20

Labor policies in hospitals. Grace M. Augustine. 1938.. .20

List of institutions offering training approved by Executive Board..... .10

Management, institution, and professional success. Quindara O. Dodge. 1940..... .10

Meat purchasing and preparation. 1942..... .10

Mineral additions to the soil, Correlation of copper and manganese content of plants and. Lila Miller and Helen S. Mitchell. 1931..... .10

Nursing curriculum. The place of nutrition in the. Henderika Rynbergen. 1938..... .10

Nutrition during pregnancy and lactation, The need for better. Bertha S. Burke. 1941..... .15

Nutrition in relation to eye function. Helen S. Mitchell. 1941..... .10

Nutritional status, The evaluation of. E. Neige Todhunter. 1942..... .10

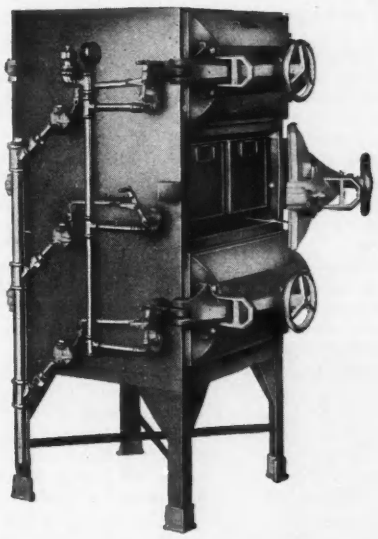
Personnel, Training the, in standards. Constance C. Hart. 1939..... .10

Research program, hospital, The dietitian's place in the. Agnes Fay Morgan. 1939..... .10

State institutions, The dietitian in. Florence Peters. 1938..... .10

Vitamin C in packaged foods. K. R. Newman and C. R. Fellers. 1940..... .05

Vitamin C retention in vegetables. Faith Fenton. 1938. .10



For Better Cooking —STEAM!

Rapid steam cooking with high initial temperature retards heat-induced destruction of vitamins, and the absence of cooking water reduces losses of soluble vitamins and other vital food elements. The absence of air in the cooking compartments prevents oxidation of vitamins and preserves essential food values. Vegetables and other foods are more nourishing and appetizing when steamed, because many of the retained soluble elements are responsible for flavor as well as nutritive value.

We are specialists in hospital equipment and our units are in profitable use in hundreds of hospitals. A Steam-Chef in your kitchen does wonders in turning out more delicious foods. It also cuts your costs in terms of fuel, time and work—and prevents food *waste*. Include a Steam-Chef in your *future* kitchen equipment budget, for delivery when these units are again available

Write for Catalog and also Steam-Chef Service Guide, giving maintenance information which will prolong the life of your present Steam-Chef.

THE CLEVELAND RANGE COMPANY

3333 Lakeside Ave. Cleveland, Ohio

Cleveland STEAM-CHEF for better cooking--STEAM

jobs, but some jobs require 3 such people to replace 2 young people.

Short Cuts. To save labor, decrease breakage, and improve service, double-deck trucks for folding chairs and nested wire baskets loaded on movable trucks holding various pieces of tableware are used at the Hotel Wolford, Danville, Illinois.

Rabbit Meat. To supplement the rationed meat supply, H. Eisen, London area organizer for the Ministry of Agriculture and Fisheries, suggests the raising of rabbits by food establishments. Rabbits can be fed on the waste from the kitchen.

Snack Shop. America's first snack shop was opened in a 2 million dollar hotel. Here "simple foods and beverages may be served at low operating cost throughout the day, encouraging patronage that would otherwise drift to drug stores or ice cream parlors."

Share-the-Meat. For a national voluntary share-the-meat program, the WPB has made the following recommendations: "Maintain the standard sizes of meat portions at present prices, except in cases where the price of meat to eating houses increases; make available half-portions at reduced prices; reduce the number of dishes of restricted meats served each day; do not emphasize dishes of restricted meats on menus; serve no more than one restricted meat to a customer at one meal; provide in the daily menu more dishes prepared from variety meats, poultry, or fish (where available) and meat alternates, such as cheese and beans."

ICE CREAM TRADE JOURNAL

Vol. 38, November 1942

*Milk products rationing for ice cream.—p. 8.
*War rulings affecting the ice cream industry. B. Terhune.—p. 18.
*New synthetic spices.—p. 30.

Ice Cream. Total demands for milk in 1943 will be larger than in 1942, and stocks on hand at the beginning of 1943 are expected to be a billion pounds below that on hand early in 1942.

Milk production this year will be 5 billion lb. less than the original goal. The shortage represents some 300 million lb. butterfat. The government is now considering plans to ration butterfat in ice cream, and one of the following possible methods may be used: a ceiling on butterfat going into ice cream at possibly 10.5%; limited gallonage; a blanket reduction of the quantity of butterfat and milk-solids-not-fat; a combination of 2 or 3 of the foregoing points; the Canadian plan.

War Rulings. Sugar allotment in the industry is held at 70%, and cocoa bean processing is held at 60%.

Synthetic Spices. Four new synthetic spices—mace, cinnamon, ginger, and nutmeg—may be used as substitutes for natural spices.

JOURNAL OF HOME ECONOMICS

Vol. 34, November 1942

Controlling living costs. A. H. Feller.—p. 635.
The home economics teacher: her service in wartime.—p. 638.
*The application form: its value in selecting cafeteria employees. M. A. Bukovac.—p. 662.
New Mexican diets. F. deB. Gilbert.—p. 668.

Application Form Value. Two hundred women chosen at random from two large firms in Chicago had their personal history data transcribed to a "standard" application form from company records on file. Each was then rated twice as to job efficiency by supervisors. Analysis of the data revealed that no statistically significant relationships exist between personal history data as given on application blanks and work performance as measured by the supervisor rating process.

MODERN HOSPITALS

Vol. 59, December 1942

*For better postwar personnel. M. K. Bloetjes.—p. 82.
*Dietitians make the most of meatless days.—p. 83.
*Food for thought.—p. 84.

Postwar Personnel. A program should be designed to stimulate the physical and mental growth of adult employees with the aim of answering our postwar personnel problems. Dietitians should guide and strive to maintain a spirit of cooperation and a common purpose within the group. A 9-point program is outlined which will aid the teacher-supervisor in such a project.

Dietitians and Meatless Days. The psychological problem arises—is it better to observe one meatless day each week, or to reduce the amount of meat in menus during the week? Meat substitutes on supper dishes, proper storage and preparation to reduce waste, use of less expensive cuts of meat, and the use of more meat dishes with extenders are suggested. Also suggests allowing only one egg for breakfast and frankfurter in place of bacon for breakfast.

Food for Thought. Enriched sugar is impractical as only traces of vitamins survive the process of refining, says the Council on Foods and Nutrition of the American Medical Association. Professor Anton J. Carlson suggests that a little calcium, phosphorus and iron be added to our table salt.

PERSONNEL JOURNAL

Vol. 21, November 1942

*Audit your absenteeism. J. F. McMahon.—p. 158.
*Real use for rating scales. H. Moore.—p. 165.

Absenteeism. Besides the economic loss to the employee and to the employer due to absenteeism, there is the production loss. Some companies have found that the best way to deal with this problem is to audit absenteeism with the cooperation of the employees to determine its cause, and then to clear up every condition in the plant found to be a cause of such illness.

Rating Scales. Industry has had to do much upgrading of workers recently, and will have to do much more. A rating scale designed to indicate the frequency with which employees meet or fail to meet the particular demands of the work situation and to provide the management with an opportunity for offering specific suggestions for correction can do much to ensure that the right employees are upgraded.

RESTAURANT MANAGEMENT

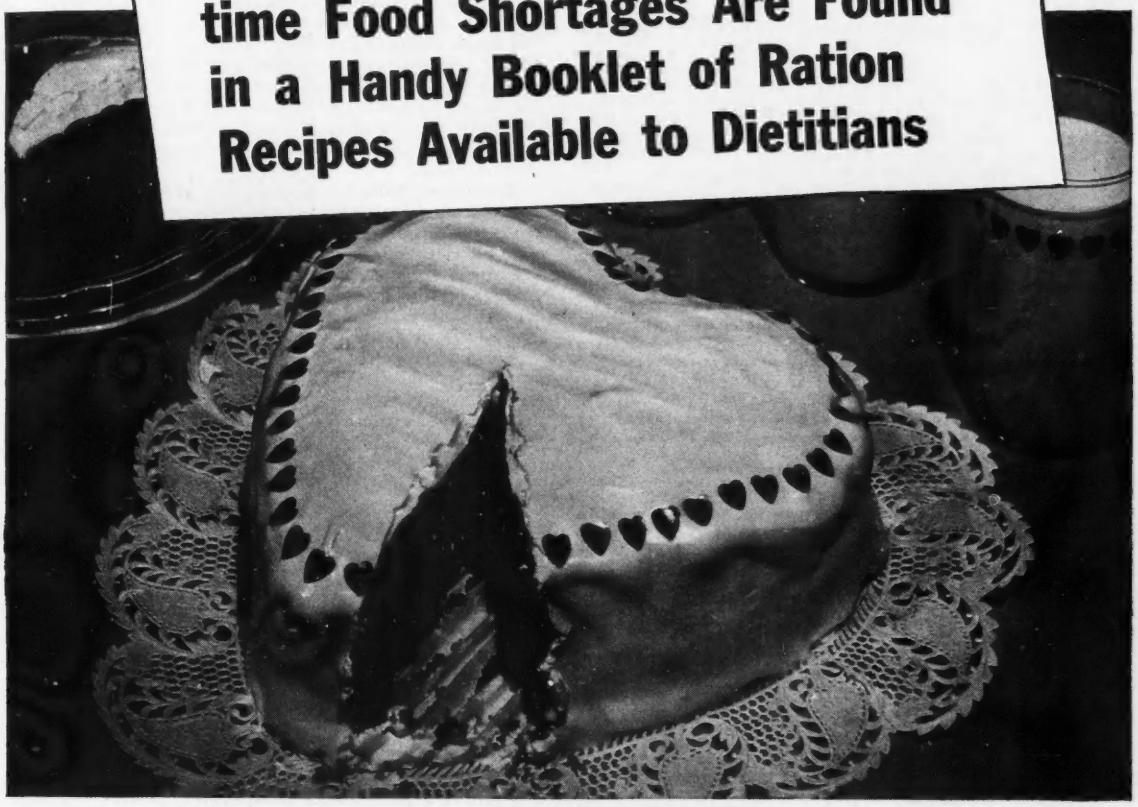
Vol. 51, November 1942

*Common sense in wartime. H. Gould.—p. 14.
*Planning ahead to use materials that are plentiful. A. G. Mezerik.—p. 20.

Department Store Restaurant. Strawbridge and Clothier, Philadelphia, has transformed its restaurant to meet the needs of women in wartime. Simplified menus, displaying only nutritious, popular food items; a buffet in the center of the room for use in taking orders; and service stations conveniently located, containing china, glassware, etc., eliminate waitress marathon, slow service, excess labor, and high costs.

Plentiful Materials. To maintain good standards and to save money, time, and critical materials, keep informed on developments in supplies; some articles are still plentiful and substitutes are available for others. The following are plentiful now: paper table and food appointments; china and glass for cooking; glass for ashtrays, lamp stands and other items; wood for table and chair legs; plastic and glass buttons for uniforms; fabricated substitutes for insulation; fiber and linen rugs; and fabricated wood floors.

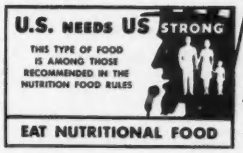
This and Other Attractive and Delicious Recipes Based on War-time Food Shortages Are Found in a Handy Booklet of Ration Recipes Available to Dietitians



WITH various food products either rationed or available in limited quantities, it's more than ever important that dietitians have usable suggestions for using foods that are now available.

Kellogg's ration recipe booklet is particularly timely. It shows the many ways that KELLOGG'S ALL-BRAN can be used in cooking—retaining all its nutritional benefits and providing needed "bulk" just as effectively as when eaten as a dry cereal.

ALL-BRAN'S value as a meat extender, as an alternative for nuts and for other cooking purposes, is getting wider and wider recognition. To learn many of the ways in which it can be used, you'll want this handy, attractively printed booklet which has the recipes prepared in large and small quantities. Send for it to Department JADA-32, Kellogg Company, Battle Creek, Michigan.



Every Kellogg Cereal is made from whole grain, or is restored to whole grain nutritive values by the addition of thiamin (vitamin B_1), niacin and iron, in keeping with the U. S. Official Nutrition Food Rules.

WHOLE GRAIN VALUE (*Thiamin, Niacin, Iron Added*)	WHOLE GRAIN VALUE (*Thiamin Added*)	WHOLE GRAIN
Kellogg's Corn Flakes	Kellogg's All-Bran	Kellogg's Shredded Wheat
Kellogg's Rice Krispies	Kellogg's Pep	Kellogg's Krumbles
	Kellogg's 40% Bran Flakes	Kellogg's Wheat Krispies

VICTORY

Vol. 3, November 3, 1942

*W. P. B. orders sharp cut in iron kitchenware styles.—p. 2.
Living costs up 0.3 per cent in September.—p. 2.
*Thermostats banned for home cook stoves.—p. 8.
*Only 25 kinds of kitchen enamelware allowed, total steel and iron cut.—p. 9.
*Some canned fruits.—p. 23.
*Sugar.—p. 23.
*All-purpose ration book to be ready for distribution soon.—p. 24.
*The papaya.—p. 26.

Vol. 3, November 10, 1942

*90 per cent of spray-dried milk set aside for armed forces and Lend-Lease shipment.—p. 15.
*Wage, salary increases will be approved only in exceptional cases under national wage policy announced by board.—p. 20.

Vol. 3, November 17, 1942

*Production of galvanized ware will be cut from 150 to 6 items after January 1.—p. 6.
*First dehydrated pork contract awarded by A.M.A.—p. 22.
*552,000,000 pounds of food delivered for Lend-Lease shipment during September.—p. 23.
*Restricted dried fruits.—p. 23.
*Food costs rise 2.4 per cent in month, before extension of control to new lines.—p. 24.
*Permanent ceilings put on potatoes, onions, turkeys in first of series on perishable and seasonal foods.—p. 25.
*Ceilings adjusted on dry edible beans.—p. 26.
*Labor, fertilizer, packaging, transport to be withdrawn from unessential crops in so far as needed to produce war foods.—p. 30.

Vol. 3, November 24, 1942

*Metal banned for many kitchen gadgets.—p. 14.
*Ice box quotas for 1943 set to save critical materials; 300,000 production planned.—p. 14.
*Living costs up 1 per cent in 1 month.—p. 18.

Kitchenware. In a drive to conserve metal scrap and pig iron, all types of cast-iron kitchenware have been reduced from 200 to 12. The amount of iron to be used in production of some items is cut in half, 75% in some, and some types of cast-iron kitchenware are eliminated altogether. Flat-irons and "scouse" kettles for Army and Navy are exempt from the order.

Thermostats. Effective December 25, 1942, thermostats attached to cooking stoves have been banned in accordance with Amendment No. 3 to Supplementary General Limitation Order L-23-c announced October 28.

Kitchen Enamelware. While cutting the amount of iron and steel available for enamelware by 25% of that used in 1942, an order announced October 26 permits increased manufacture of the items on which production will be concentrated now. This concentrated output will have to satisfy military as well as civilian requirements. Enamelware has become the major substitute for aluminum and stainless steel kitchenware and for hospital utensils. Beginning November 1 the raw material allotment for hospital enamelware equipment was doubled. The items continuing to be manufactured, designed for most essential requirements in home, restaurant and Army and Navy kitchens, include 9½ to 12-quart coffee-boilers, steam-table insets, 14 to 20-qt. kettles, ladles, 10 to 12½-qt. water-pails, steam-table pans, 6 to 7-cup percolators, stock-pots, 1¾ to 2½-qt. saucepans, 1½ to 2½ and 6½ to 8-qt. double-boilers and 9 to 15-qt. dishpans.

Canned Fruits and Vegetables. Delivery of vegetables, fruits and juices for consumer may be made to wholesalers, jobber, retailer, or wholesale receivers in advance of dates set by Conservation Order M-237 according to amendment announced October 30. In accepting goods, the buyer must certify that he will hold food under the same restrictions which would have applied if the canner had stored the food. No additional foods are available to the consumer but canner's storage space is relieved.

Sugar. OPA has announced that retailers and wholesalers may replace sugar lost in repackaging when transferring from large to small containers up to 1% of the sugar repackaged.

All-purpose Ration Book. Final approval of new all-purpose ration book was given by OPA October 25. The book contains 192 coupons equally divided into red and blue colors. Letter and number designations will make coupons usable in a variety of ways for either point system or straight rationing and provides rationing control for 2 major lines of commodities for a minimum of 6 months.

Papaya. Cuba, natural habitat of papaya fruit, is reintroducing cultivation of the plant on a large scale in order to supply the United States with papain, the dried latex derived from papaya, which has many commercial and medicinal uses.

Spray-dried Milk. A conservation order effective November 5 allocates 90% of spray-process dried skim milk for direct war needs. To date, offers of the produce and purchases have been lagging behind Lend-Lease requirements. The armed forces continue to have first call on the supply.

Wage Increases Prohibited. National War Labor Board announced a wage policy wherein increases in wages and salaries will be approved only in exceptional cases. Wage rates prevailing September 15, 1942 will be considered proper. A bonus, fee, gift, commission or other form of compensation customarily paid employees can be continued if it is a fixed amount with total not exceeding preceding year or if it is computed on a percentage or incentive basis to be computed by same method as last year.

Galvanized Ware Production. By January 1, 1943, a total of 150 articles of all sizes and kinds will be reduced to 6 articles of only a few sizes, releasing 44,000 tons of steel and 10,000 tons of zinc for the war production program. Order L-30-a applies to all products made of iron or steel with plain, japanned, painted, lithographed or lacquered finish. For the next 2 months 50% of the following items based on the amount produced monthly during 1941 may be made: garbage-cans and pails, pails and buckets, fire-buckets, wash-boilers, fire-shovels, funnels, refrigerator pans, and kerosene storage containers. Dimensions and number of sizes and gauge of steel are specified. Effective January 1, output will be cut to allow only garbage-cans, pails, wash-boilers, fire-shovels and wash-tubs, with pails and wash-tubs at 40% the monthly rate in the base period and 50% of the other items of the same base period.

Dehydrated Pork. A contract for 110,000 lb. dehydrated pork to be processed and delivered within a few weeks was awarded for Lend-Lease shipment. Product is made of precooked, fresh, lean pork. Granular in shape, its texture and color are similar to brown sugar. The volume is one-third the original boneless meat and weighs one-fourth as much. This product is being substituted for beef as it is more generally available.

September Lend-Lease Shipment. The Department of Agriculture announced November 9 that 552,000,000 lb. concentrated foods and animal protein products were delivered for shipment to allied nations during September. Since April 1, 1942, about 16% of the total deliveries for shipment have been dairy products as compared to 2% for World War I, 24% pork products as compared to 6%, and 20% grain and cereal products as compared to 65%.

Restricted Dried Fruits. Apples, apricots, peaches, pears, prunes and raisins may be released for civilian use only on notice from WPB. However, packers may sell dried fruit to the Army and the AMA without specific allocation by WPB.

Rise in Food Costs. Nation-wide food cost for the average family rose 2.4% between September 15 and October 13, according to Secretary of Labor Perkins. Retail groceries were selling food 6.6% higher than mid-May level, 16% higher than a year ago and 129.6% above the 1935–39 aver-

toast:

Ammunition for our fighting men!

Food that *restores energy* is vital ammunition in wartime. Enriched white bread is such a food; it helps supply the extra vitamins and minerals that keep bodies strong, minds alert.

Toasting increases bread consumption. Toast, prepared the SAVORY WAY, makes bread more appetizing: The pre-cooked center of every slice is soft and delicious, the outside is crisp and golden brown. And toast is more easily digested...it *goes to work faster* to give you the energy you need to tackle your war job.

Today, SAVORY TOASTERS are giving thousands of men the kind of toast they want as fast as they can eat it.

MODELS FOR EVERY USE *Both gas and all-electric in sizes to suit every need from the smallest to the largest.*

MASS PRODUCTION *One continuous "Niagara" of toast, which keeps cafeteria lines and kitchen schedules moving smoothly and efficiently.*

SAVES DAILY BAKING *Savory makes fresh, soft-centered golden-brown toast, even from three-day-old bread.*

EFFICIENT *Saves time, labor, fuel and money.*

CONSTRUCTION *Built sturdily and attractively, yet with a minimum of critical materials.*

For specifications and prices write to your nearest equipment dealer's, or

Savory

EQUIPMENT, INC.

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age. Prices at retail for oranges, butter, potatoes, cheese, onions, evaporated milk, flour were all higher than the usual seasonal advance. A decrease was reported for lamb. Increases in foodstuffs not under control were markedly higher than those controlled. The increase as compared with last year at this time ranges from 3.4% for cereals and bakery products to 34.6% for fresh fruits and vegetables.

Perishable and Seasonal Food Ceilings. To ensure continued bumper production, iron out price inequities between various grades, types and markets and provide definite assurance to consumers that prices will reflect the normal seasonal changes, Price Administrator Henderson established the first permanent price controls November 7 on 3 important perishable and seasonal foods—potatoes, onions and turkeys. To protect consumers against hidden price increases the new maximum prices are tied to Department of Agriculture's grades. Base for potatoes is U. S. No. 1 in 100-lb. sacks. There are premiums and discounts for other grades. Turkeys are graded A, B, C, according to specifications, prices differing with age, sex, and weight. Onions are in 2 grades: U. S. No. 1 and "ungraded." Retailer must post a sign properly identifying U. S. No. 1 grade.

Dry Edible Bean Ceilings. November 9, OPA set specific price ceiling for each class and grade of dry edible beans for country shippers and distributors. New ceilings are slightly higher reflecting increased production and raw material costs.

Unessential Vegetable Crops. Chairman of Food Requirements Wickard stated that the Department of Agriculture "could not assist in the production or marketing of the less essential winter vegetable crops." Such "less essential vegetables" include cantaloupes, cucumbers, cauliflower, eggplant, watermelons, bleached celery, head lettuce, green peppers, asparagus, and artichokes. In listing asparagus and artichokes widespread plowing up of the plantings was not suggested.

Kitchen Equipment. Order L-30-d affects all kitchen items other than galvanized, enameled and cast-iron ware already restricted. Glass or ceramic flameware, cooking utensils and storage utensils are included. Metal is completely prohibited in rinsing pans, pot scourers, dust-pans, silent butlers, crumb sets, washboards, and clothes wringers, among other things. In kitchen tools, metal will be permitted in the production of only wire strainers, can-openers, egg-beaters, food-mills, food-choppers, cake-turners, and basting-spoons. Such metal is restricted to 35% of the amount used in year ending June 30, 1941. No cooking vessels containing more than 20% metal by weight are allowed after November 23 except black steel frying pans and roast pans used in Army and commercial kitchens. All household storage articles are prohibited with the exception of vacuum-bottles of 1 quart or less capacity and produced in 50% of normal quantity.

1943 Ice Box Quota. Program for production of over 300,000 ice boxes in 1943 was announced November 14 by WPB. A new principle of assigning quotas to individual ice refrigerator manufacturers in proportion to their ability to cut on the use of critical materials is being used by WPB.

Rise in Living Costs. Between September 15 and October 15 living costs of city workers' families rose 1%. Due mainly to rising food prices prior to OPA additional price control bill of October 5, the cost of coal and medical and personal services also advanced quite generally.

Incidence of Single and Multiple Dietary Deficiency

When the diet was deficient in only one nutrient, the specific nutrient involved was ascorbic acid in nearly two-thirds and riboflavin in slightly over one-fifth of such diets. When multiple deficiencies occurred, ascorbic acid was one of the deficiencies in nearly two-thirds of these diets also; but riboflavin was part of the multiple deficiency combinations in 84 per cent of the diets with two or more nutrients supplied in amounts less than two-thirds of allowances. Calcium was one of the deficient nutrients in 54 per cent of the multiple deficiency diets, but was the sole deficiency in only 2 per cent of all diets or 6.8 per cent of single deficiency diets.

The rare occurrence of thiamin, vitamin A, niacin, and iron as single dietary deficiencies or of combinations of these nutrients without riboflavin, calcium, or ascorbic acid also being deficient suggests two observations on the eating habits of this group. A small, but significant, proportion of these men apparently ate a very restricted diet, and a generally increased consumption as well as improved food choices probably was needed. For most of the men, a better consumption of milk and of citrus fruits, tomatoes, and certain green vegetables would correct the major deficiencies of riboflavin, calcium, and ascorbic acid and raise the intake of most other nutrients. Conversely, if an average mixed diet contains sufficient amounts of riboflavin and ascorbic acid, it will seldom be deficient in the other nutrients.—*Wiehl, D. G.: Diets of a Group of Aircraft Workers in Southern California. The Milbank Memorial Fund Quarterly, 20: 329, 1942.*

What can the dietitian do about food shortages?

NO ONE in America need go hungry. Nutritious substitutes *can* be found for unavailable foods. But there is no doubt that wartime food shortages present one more problem for the 3 out of 4 Americans who are already living on unbalanced diets.

Every day it grows harder for the average housewife to plan well-balanced meals . . . meals that her family will *like*. And the millions of women who are adding war work to housework will have little time to give to the careful buying and preparation of food.

Dietary Supplementation . . . now!

What is the answer? Can we afford to wait and hope that, in spite of wartime obstacles, people will somehow achieve an optimal diet? Many nutritionists feel we cannot; they believe dietary supplementation is the right answer to today's emergency. And many of them prefer Vimms. Here's why!

1. **Vimms are complete.** They supply not only all of the vitamins the government recommends as essential, but three vital minerals as well, the only three commonly lacking in the average diet. Further, Vimms supply these six vitamins in the full daily minimum amounts recommended by the government. (See chart.)

2. **Vimms are balanced.** Medical councils have established the proper ratios for compounding supplements. Vimms are correctly balanced in these ratios—vitamin for vitamin.

3. **Vimms are palatable.** These small white tablets are easy to chew or swallow. Children like them.

4. **Vimms are inexpensive.** (50¢ for 24 tablets; $1.75 for 96 tablets; $5.00 for 288 tablets.) And no product at any price matches all the advantages of Vimms!

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If you haven't tried Vimms, we'll be glad to send you a professional sample. Write to Lever Brothers Company, Dept. AD-5, Pharmaceutical Division, Cambridge, Mass.

VIMMS MEET OR EXCEED MEDICAL RECOMMENDATIONS*

Medical recommendations are based on these Gov't standards	VITAMIN	See how 3 Vimms meet or exceed these standards
4,000 USP Units	A	5,000 USP Units
1.0 Milligram	B_1	1.0 Milligram
2 Milligrams	B_2	2 Milligrams
30 Milligrams	C	30 Milligrams
400 USP Units	D	500 USP Units
10 Milligrams	P-P (Niacin Amide)	10 Milligrams

In addition, Vimms supply these vital minerals:

CALCIUM . . . . . 375 Milligrams
PHOSPHORUS . . . . 250 Milligrams
IRON . . . . . 10 Milligrams

*Jour of the A. M. A., July 18, 1942, pp. 948-9

Vimms

all 6 vitamins • 3 minerals

in each tasty tablet

News Notes

Dietitians Enlisting in the Medical Department, U. S. Army. According to information received from the Superintendent of Dietitians, Helen C. Burns, of the Office of the Surgeon General, War Department, Washington, under date of December 31, all applications from dietitians who wish to enter the service should be sent directly to The Surgeon General, U. S. Army, Washington, D. C. The educational requirements, it is expected, will continue to be the same as they now are, that is, a degree plus a qualified training course or its equivalent in two years of qualified hospital experience, one year of which must be within the last ten. It is expected that the age and physical requirements will be similar to those of the Army Nurse Corps. As soon as further information regarding qualifications is released, as these may be affected by passage of H. R. 7633, it will appear in this JOURNAL.

Midyear Meeting, Executive Board, American Dietetic Association. The Board will convene in Chicago on February 19–20 inclusive, according to an announcement of the President, Frances MacKinnon.

Administrative Training Course for Dietitians Reduced to 9 Months. On December 9 Mrs. Quindara Oliver Dodge, director of the training course, Women's Educational and Industrial Union, Boston, announced that in compliance with the recommendation of the American Dietetic Association their 12-month approved course will be reduced to 9 months for student dietitians who do satisfactory work. Mrs. Dodge stated that since the Union course "offers exceptional strength in preparing dietitians for industrial feeding programs or Army mess halls, we considered it our duty to support this plan." The shorter training period makes it feasible to try to work out a program admitting two groups each year. If a sufficient number of students meet the requirements and complete their credentials in time to receive their appointments by February 1, the second group will begin training February 13, 1943. Those wishing appointments for September 1943 or February 1944 should send all credentials and applications by February 15. Competitive awards for these last two groups will be made by the Board of Government on April 15. Each group will be kept to six students. Laundry of uniforms, meals as well as restaurant shoppers' allowances will be given students as in other years with the addition of a $6 per week stipend in cash for the last four months. Affiliations will be maintained with Wellesley College, Graduate School of Business, Harvard University, Hotel Statler, and suburban schools in Brookline, Medford, and Newton.

Army Dietitians. As indicated editorially and elsewhere in the January JOURNAL, the Edmiston Bill, granting military status to dietitians attached to Army hospitals, has become a law. Information concerning dietitians now in service contained in letters, especially from dietitians in overseas service, is requested by Mary Northrop, who wishes to incorporate all such information of general interest routinely in this JOURNAL. With the passage of the above-mentioned bill, it is anticipated that enlistments will be encouraged; therefore short papers by dietitians already in the service, both within the continental limits and overseas, descriptive of their work and containing other pertinent information for the newcomer in the service, will be welcomed by Miss Northrop and the JOURNAL staff. Likewise, any questions from prospective Army dietitians regarding the service will be welcomed by Miss Northrop, who will attempt to answer these or see that they are answered by other competent authorities. All information requested above should be addressed to Mary Northrop, King County Hospital System, Seattle. It should be mentioned here, too, that Millie Kalsem, chief dietitian, Cook County Hospital, Chicago, is the member of the War Activities Council (of which Nelda Ross, Presbyterian Hospital, New York is chairman) in charge of stimulating enlistment of dietitians for Army service. Miss Northrop, as a member of the Journal Board, was appointed by that Board to assemble information of interest and assistance to the Army dietitian for publication in this JOURNAL.

Roster of Scientific Personnel. The National Roster of Scientific and Specialized Personnel, connected with the War Manpower Commission, urges all "senior and graduate students of chemistry, physics and other specialized fields" to register immediately with the Roster, stating the fields in which they have training or knowledge, and addressing the information to Dr. Leonard Carmichael, Washington, D. C., the director. Registration is not considered to be application for employment although many registrants have received offers and 140,000 men and women have thus been referred to prospective employers, particularly to aid in war production and research. The roster has listed more than half a million names in more than sixty specialized occupations. The names filed include some of the most famous scientists in the country as well as recent graduates of scientific courses.

Colorado Hospital Unit. The 29th U. S. Army General Hospital (Colorado Hospital Unit) has been activated as a unit at Fort Meade, Maryland, and is expected to be ordered to foreign service in a short time. Included in the personnel are the following dietitians: Doris Odle, Emma J. Hollett, and Fern A. Stone.

M. Faith McAuley. Word has been received from Anna M. Tracy that Miss McAuley, formerly chairman of the Administration Section, American Dietetic Association, is teaching in the School for Cooks and Bakers, U. S. Navy, located at the University of Indiana, Bloomington.

Dr. Elvehjem Receives Award. At the New York meeting of the Grocery Manufacturers of America in November, Dr. C. A. Elvehjem received an award of distinction for his

The Newer Concepts of Meat in Nutrition

Meat...
and the Acid-Ash Diet

MAINTENANCE of urinary pH within certain limits is frequently advisable in the treatment of local conditions in the urinary tract. This may be accomplished by the administration of inorganic salts and by the institution of proper diet. In some cases both means are utilized, while in others diet alone may suffice.

A diet adequate for this purpose must be so organized in pH influencing factors that the urine will show the desired hydrogen ion concentration. Thus dietary adjustment becomes a valuable tool in the treatment of urinary tract affections.

Phosphatoptosis, with or without calculi formation, and infection with Escherichia coli are common conditions of the urinary tract in which maintenance of an acid pH of the urine is indicated. Because phosphate precipitates only in an alkaline medium, phosphatoptosis and the recurrence of phosphate concretions are prevented by holding the urine to an acid pH. Since an acid urine also is unfavorable to the growth of Escherichia coli, an acid-ash diet becomes an important instrument in therapy.

Meat is a good source of acid forming elements—chlorine, phosphorus, and sulfur. Hence it is an important constituent of the acid-ash diet. In addition, it provides the patient with biologically adequate proteins, B vitamins, and the essential minerals iron and copper.

The Seal of Acceptance denotes that the statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute
CHICAGO

contributions to the science of nutrition. The award was made by Dr. Frank G. Boudreau, and the advisory committee was composed of Drs. George R. Cowgill, L. A. Maynard, R. Adams Dutcher, and Helen S. Mitchell.

Addresses and Discussions, Wartime Emergency Conference, National Restaurant Association, Chicago, October 6–8, 1942. These are available in mimeographed form, circla-bound, for $3.50 on application to the National Restaurant Association, 666 Lake Shore Drive, Chicago. The material was released early in December.

At the meeting of the association (some of the proceedings of which are reported in the Nutrition and the War section of this JOURNAL) the members of the Nutrition Committee adopted as the responsibility of the industry as a whole a comprehensive program to further the aims of the National Nutrition Program, including the following points: (1) plan menus to make appetizing meals, provide adequate diets, (2) gear nutrition with food rationing and make unfamiliar foods appetizing, (3) study food storage to conserve vitamins and minerals, (4) use cooking methods which retain a maximum of nutritive elements, (5) train the whole staff in the rudiments of good nutrition, (6) cooperate with local nutrition committee. Other immediate objectives are: (1) encourage consumption of whole wheat or enriched bread and cereals; the use of enriched flour in restaurants doing their own baking, (2) put more green and yellow vegetables on menus (service of specific items will, of course, be related to seasonal and local supply factors), (3) include more fruit and fruit juices on menus, (4) change, if necessary, present methods of preparing, cooking, and serving vegetables for results that preserve color, flavor, texture, and maximum nutritive elements, (5) encourage the use of milk, cheese and dairy products available, (6) gear meat and other rationing to the National Nutrition Program.

In the December 18 *News Letter* of the National Restaurant Association from which the above points were quoted, there is an account of recent contacts of representatives of the association with government officials concerning various subjects, including meat rationing. It is stated that plans were developed with OPA for "ration banking," a system by which the nation's 14,000 banks will handle ration coupons in checking accounts similar to those used in handling money. It is believed that this will greatly simplify the work of the ration boards. Only one certificate may be issued, and through a system of vouchers the restaurant can draw against this certificate. Protests were entered with WPB against a proposed order that would prevent the delivery of sliced bread. This order was contemplated because slicing knives in bakeries cannot be replaced and also as a means of conserving waxed paper. The Association protested against the order because restaurants have neither the labor nor equipment to slice bread and it was pointed out that there would be a tremendous waste of bread if the order were entered. In addition, the restaurateurs contended that conservation of waxed paper was not an issue because any type of wrapping paper would be satisfactory for restaurant use. These protests brought an assurance that consideration would be given to an amendment to exempt all loaves of bread weighing two or more pounds.

Since restaurants have been limited on the amount of ice cream they may make, some of the larger ones are conserving by the following methods: limiting the flavors to two a day and eliminating the fancier flavors, such as coffee, tutti-fruitti, etc.; stopping carry-out sales; limiting one portion to a customer; stopping the sale of à la mode desserts. Consideration is also being given to eliminating ice cream from table d'hote meals, and making it available only on à la carte orders.

A manual entitled "Training Restaurant Sales Personnel," by Ruth Lusby, written under the direction of the U. S. Office of Education and the National Restaurant Association, is now ready in permanent form and may be obtained from the Superintendent of Documents, Washington, at 35 cents per copy. The manual has been completely revised and two new sections, "The Work of Special Salespersons" and "Selecting Food for Physical Fitness" have been added. The former consists of the following: (1) supervising the service (hostess, assistant hostess, captain), (2) providing supplies and assisting with the service (omnibus boy, floor girl, special food server), (3) serving the customers at the cafeteria counter (counter salespersons), (4) checking the customers' trays, and (5) handling the money (cashier). Instructions on how to use the book are given. Alberta Macfarlane, Educational Director National Restaurant Association, states that in its present form the manual should be valuable for use in institutional management departments in colleges. Another publication now available from the association, 666 Lake Shore Drive, Chicago, is a bulletin on "Meat Extenders and Alternates" which sells for 25 cents. It includes recipes submitted at the Wartime Conference of the association by outstanding restaurateurs. This very timely collection will aid materially in the "Share-the-Meat" program. Certain of the "meat alternate" recipes mentioned by Winifred Eliason in this JOURNAL for December are included, as well as others contributed by women well known to members of the American Dietetic Association, namely, Leonore Richards, Grace E. Smith and Alice Easton. All the recipes, the amounts for which are stated, of course, in quantities for large groups, will be of interest to dietitians in hospitals and other institutions. The number of servings is stated and in some instances the total cost and portion cost.

Report of the Chief of the Bureau of Home Economics, 1942. Louise Stanley, chief, Bureau of Home Economics, U. S. Department of Agriculture, in a report dated September 15, 1942, and received at the office of this JOURNAL in December, gave an account of the accomplishments of the Bureau for the year ended June 30, 1942. Outstanding among these accomplishments are the following: inquiry into the incomes, expenditures, and savings of a representative sample of rural families to show their living situation in 1941 and the first quarter of 1942, the resulting figures from which were needed by the WPB in determining rate of replacement of certain household equipment and clothing; study of the relative economy of various commodities as sources of nutrients to show nutritive values for each unit of land and for each unit of farm and retail cost, and of how recent trends in food consumption affect nutrition and relative importance of various foods or groups of foods as sources of nutrients, to provide background information pointing to ways and means of dealing with possible food shortages; publication of a complete compilation of the reported research of the world up to January 1941 showing vitamin A, thiamin, riboflavin, ascorbic acid, and vitamin D values in terms of absolute weights or international units of foods in relation to processing and other variants and publication of these findings and their application to home cooking methods in popular language; development of method of evaluating flavor of dried eggs which has been used in testing all dried eggs for purchase by Lend-Lease; participation in cooperative project initiated by Agricultural Research Administration on dehydration of meat, and testing of a number of dehydrated vegetables, fruits, and soup mixtures; development of food driers for home use, and study of home drying of foods; publication of educational materials on food conservation; development of performance standards and standard test procedures for household equipment; research toward establishing minimum requirements for working and storage space in kitchens, for use in war housing program; formulation of rations for shipment to prisoners of war; development of a quick method of calcu-

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lating nutritive value of Army rations, in collaboration with the War Department; determination of figures on average consumption of sugar for families in normal conditions, for use in establishing sugar rations and preparation of sugar-saving recipes; development of home-made fireless cooker, at the request of the American Red Cross; compilation of specifications for all types of household equipment on the market in 1941, for use by OPA as a basis for programs on simplification, recommended standards, and production curtailment, to determine value of special features in larger pieces of household equipment in relation to their usefulness and to the amount of strategic materials used in their construction; publication in cooperation with the OPA of practical directions for use and care of household labor-saving devices.

Two new booklets, published by the Bureau of Home Economics, are: "How to Make Your Ironing Equipment Last Longer" and "How to Make Your Gas or Electric Range Last Longer."

Nutrition in Industry. Included in the program of the Fifth Annual Congress on Industrial Health at the Palmer House, Chicago, January 11–13, and sponsored by the Council on Industrial Health of the American Medical Association was a symposium on nutrition in industry with the following subjects and speakers: "Criteria for the Evaluation of Nutrition Experience in Industry," Dr. Franklin C. Bing; "Progress in the National Program on Nutrition in Industry," Dr. Robert S. Goodhart; and "Current Nutritional Activity in Industry," Dr. George R. Cowgill. A round-table discussion concluded the program. The speaker at the final luncheon meeting on January 13, Dr. Morris Fishbein, discussed "Can We Eat Our Way to Health or Sickness?"

Social Work Publicity Council, Inc. Catherine Emig, extension secretary of the Council, 130 East 22nd St., New York, writes that the Council is desirous of obtaining "more information about the publicity and health education material put out by dietitians over the country and most particularly, about the kind of exhibits they are using." In brief, the Council functions along the following lines: the publication of a magazine, *Channels*, which, it is stated, "is a vivid, practical digest of what is going on in social work publicity and public health education all over the country." Published eight times a year, it contains radio programs, newspaper stories, annual reports, and appeals. Also issued are "How-To-Do-It" bulletins, such as "Annual Reports and How to Improve Them"; "How to Plan a Public Relations Program"; and "Photographs and How to Use Them." These are sent without charge to members, and to others on order. A third project is advice on the problems of members, and also an information service on sources of publicity material. The fourth service mentioned consists of a mailing to members every six weeks of "Mail Packets" containing pertinent items culled from house organs, annual reports, trade papers, picture magazines and public opinion journals, each suggesting a new way to approach an old problem or to meet a new one. Membership rates in the Council are as follows: Subscription to *Channels*, $3.; membership, including subscription and two bulletins, $5.; service member, subscription, all bulletins, mail packet and consultation service, $10.; sustaining member, a supporting membership, subscription to *Channels*, and all service member privileges, $25.; and professional membership for public relations technicians, $7.

Army Field Ration Biscuits. After extensive experiments in producing a suitable biscuit for the Army ration, variously called "pemmican biscuit," "defense biscuit," and finally "K-1 biscuit," a satisfactory product has been produced by the National Biscuit Company, according to the *Food Field Reporter*, November 23. The ingredients are whole wheat flour, soy bean meal, oatmeal, gelatin, powdered eggs, skim milk powder, sugar, molasses, and shortening, with cinnamon added for flavor. It will be wrapped with the K-2 biscuit (a compressed Graham biscuit) in a packet 1½ inches thick.

Food Forecast. An editorial article in the December issue of *Fortune*, entitled "Food: What We Shall Get in '43" gives a summary of the food production gains which have been accomplished in 1942, and then proceeds to forecast the possible supply which will be available to civilians in this country during 1943. According to this article, the problem for the coming year will be complicated by the manpower shortage, the shortage of metal for farm implements, transportation difficulties, increased Lend-Lease requirements "with the probable improvement of the shipping situation and the expansion of dehydration capacity until the United Nations' food pool will be lifted from the sphere of after-dinner speeches and gradually become a reality . . . which implies that . . . . we shall have to share our food with all those who are fighting this war on our side until such time—theoretically at least—as Americans have been reduced to the consumption levels of England, Russia, and China." The editors of *Fortune* also express the opinion that the opening of a second front will sharply increase our food liabilities, "because the more successful we are in this venture, the more millions of starved European Nazi victims can be fed." Needs of America's armed forces will be almost three times as large as in 1942, assuming a total of 10,000,000 men and women to be in the forces by next year. (Army and Lend-Lease, it is estimated, will take about one-fifth of next year's food supply).

In another article in the same issue, entitled "Food Rationing: The Time is Now," the various methods of rationing are described and the problems of applying the correct system and of deciding what foods should be rationed are discussed. In regard to the latter, it is stated that when one food, such as meat, is rationed, the pressure on the foods that remain free grows with every new item controlled, so that "circumstances will tend to force further rationing until all foods have been covered except abundant products such as cereals and the seasonal fresh vegetables and fruits." It is also suggested that a serious threat to the entire rationing structure arises from the fact that one-fourth of the nation's food consumers are food growers.

Nutrition Program Offered by Parents' Magazine. For discussion at P.T.A. meetings, home economics classes, mothers' clubs, etc., an article presenting various important features of nutrition will be published each month in *Parents' Magazine*. Beginning with the February issue, subjects will include "Vitamin C"; "A Good Main Course"; "Priority Goes to Energy"; "Make the Most of Spreads"; "Serve Colorful Salads"; "Treat Eggs With Care"; and "Budget Vegetables." As a study for groups or individuals, this is an attempt to interpret government information in regard to nutrition.

OWI Releases. Three pamphlets issued by the Office of Price Administration are available to consumers through the OWI, Washington: "Buy Fresh Fruits and Vegetables for Wartime Meals," which stresses the use of fresh foods to save labor and materials; "Rationing Why and How," published in August 1942, which gives the reasons for rationing and explains the methods used in rationing certain materials up to that date; and "How *You* Can Help Keep Wartime Prices Down," which answers questions about the regulation of price ceilings and tells what the consumer can do to assist in this program.

Government Purchases for Lend-Lease. Filling orders of the allied nations, the Agricultural Marketing Adminis-

MEAT SHARING AND THE NEW IMPORTANCE OF WHOLE WHEAT

The use of NABISCO SHREDDED WHEAT as a meat extender

We are all facing restrictions in the home consumption of meat. How will reduced intake of meat affect the nutrition picture?

For meat, as we all know, contributes more than just protein. In meat, appreciable amounts of such vital elements as iron, phosphorus, niacin and thiamin (Vitamin B_1) are also present in each serving.

Fortunately, these same health building elements are present in Nabisco Shredded Wheat. Served as a meat extender, this product made of 100% whole wheat helps to maintain the protein, mineral and Vitamin B_1 balance in the diet.

When recommending Nabisco Shredded Wheat, it is well to insist on the original Niagara Falls product.

Baked by NABISCO
NATIONAL BISCUIT COMPANY

tration purchased nearly $3,000,000 worth of vitamins during the month of October, according to the *Food Field Reporter*. More vitamin B_1 and C were purchased during this month than in the 18 previous months of the Lend-Lease program. Other foodstuffs bought by AMA during October included 62,600,000 lb. canned pork; 8,300,000 lb. canned processed cheese; 32,200,000 lb. lard; 23,200,000 lb. edible salad oil; 3,000,000 lb. dehydrated vegetables; 14,600,000 lb. dried process raisins; 6,750,000 lb. soya grits; 17,450,000 lb. sugar; 60,500,000 lb. rice; 73,000,000 lb. dried beans, and 51,900,000 lb. dried peas. Products bought for the first time included dehydrated yeast, rutabagas, *garbanzos* (chickpeas), pork and frozen mutton.

Reprints of Food Industries Articles. A set of 27 reprints of articles on the dehydration of foods and related topics, which have appeared in *Food Industries*, is available from the McGraw-Hill Publishing Company, 330 West 42nd Street, New York City, at $1.50 per set.

The Canning Program. Over 600,000 gallons of fruit, vegetables, pickles and relish were canned by the Illinois State Institutions for use this year. According to Mrs. Christine Ryman Pensinger, chief home economist for the state, the personnel and patients at the various institutions have shown great interest and cooperation in both the growing and canning of the foods. Most of the harvesting and preparation of the fruits and vegetables was carried on by the patients themselves, under the supervision of the Occupational Therapy Department. Mrs. Pensinger states that "on several occasions there were as many as 250 women on the lawn at the Elgin State Hospital and while they were snipping string beans the institution's 25-piece band entertained with a program of music." She adds that plans are already under way for larger gardens during this year and additional canning equipment to take care of a large canning program.

Conservation Copy. The National Restaurant Association, 666 Lake Shore Drive, Chicago, has announced that it is desirous of obtaining from members any advertising material, display cards, table easels or menu tip-ons they have used to explain food shortages and urge conservation by customers. A table easel which explains a restaurant's participation in the "Share-the-Meat" program was included in the November 30 *News Letter*, copies of which may be obtained "in reasonable numbers" by writing to Pfaelzer Brothers, Union Stock Yards, Chicago.

Standard for Canned Peas Amended. The definition and standard of identity for canned peas established under the Federal Food, Drug, and Cosmetic Act has been amended by an order signed by the Acting Federal Security Administrator, November 25. The amendment provides for the use of traces of alkalis (sodium carbonate, calcium hydroxide, and magnesium hydroxide) in succulent canned peas for the purpose of retaining the natural green color of the peas. It also specifies the label statement to be used on canned peas when such alkalis are added. Copies of the Federal *Register* of December 1 in which this order appears may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 10 cents each.

Hearing on Condensed Milk. A public hearing was held January 26, under the provisions of the Federal Food, Drug, and Cosmetic Act, to consider a proposal to amend the definition and standard of identity for sweetened condensed milk so as to provide for the use of corn syrup as an optional ingredient in that product. Consideration was also given as to whether a separate and distinct definition and standard of identity, under a name other than "sweetened condensed milk," should be prescribed for a food of a composition substantially the same as sweetened condensed milk but in which corn syrup has been substituted wholly or partly for the saccharine ingredients specified in the definition and standard of identity for sweetened condensed milk.

Packages of Noncritical Materials. Some of the new developments in packaging, according to an account in the *Food Field Reporter* of a recent exhibit of the Packaging Institute in New York, include the following: several cellophane packages for dehydrated foods for the armed forces and Lend-Lease, such as soups, carrot juice, cocktail mix, lemon juice powder, bouillon powder, and cocoa beverage; heavy cardboard sanitary boxes, metal-stapled, for fish fillets, to replace the 20 or 30-lb. tin boxes previously used; life boat and emergency ration chocolate package—paper box lined with lead foil-plastic-paper liner; waterproof match pack; carton holding 5 oz. dried whole eggs, of Kraft-sized chipboard, asphalt-laminated to grease-proof glassine, the carton to be sealed on one end, filled and the other end sealed, then fully wax-dipped; package of parchment, laminated to a special type of cellophane for wrapping cream cheese; a cellulose laminated material which looks like steel and can be pressed into the shape of gaskets and other hardware ordinarily made of metal; a metal-replacement package for shortening, consisting of a round paper box with a bag of heat-sealing moisture-proof cellophane set inside, folded over the edge of the carton and heat-sealed to it; a glassine-paper-lined 5-lb. paper package which takes the place of a metal friction plug can to hold 5 lb. dichloricide with killer, the new paper container having ripcord for easy opening, an inner drumhead seal and a slip-cover construction; a "smother-out" bag containing granulated bitumen for use against incendiary bombs; grocery bags printed with patriotic messages; "tote" boxes or trays made of tough light board with glassine lining for food products.

Among the other new products and packages on display were: a 5-gallon dehydrated vegetable unit (Q.M.C. specifications) with a special Kraft-asphalt-lead foil-cellophane laminated liner; a package protected by a rust-proof substance so that materials may be submerged in salt water, buried in swamps and river bottoms by a retreating army and recovered later in perfect condition; a paper pail in which no metal, not even wire, is used; an embossed parchment wrap for hams, which is grease-proof, moisture-proof and acid-proof, but through which ham can "breathe," discouraging mold; a corrugated board box, lined with shredded white parchment for plum pudding which has been first wrapped in glassine; coffee package made of strong white paper, with special double coating of moisture-proof heat-sealing cellulose, constructed on specially built machine so that all seams at the top, bottom and sides are welded with heat and in which air is displaced with CO_2; all-paper shaker package, with closure disc provided with one or several perforations, regulated by turning a fiber knob or by "pleats" along the edge of the disc; 5-oz. dried egg carton with an inner grease-resistant liner and an outer moisture-vapor-resistant coating; paper emergency cocoa pack in which only the closure is metal and which is "sift-proof"; wheat germ carton which consists of a heat-sealed bag inside a folding carton; and a vegetable shortening package of ordinary convolutely-wound paper, lacquered inside and outside, and sealed inside and out with heat-sealing laminated cellophane.

At one session of the Packaging Institute, WPB officials informed those present that the only noncritical metal, lead, is not adapted to use as a closure material by itself; therefore, makers of nonessential products must use plastics, wood and paper. The use of paper liners in existing steel containers was recommended and the manufacture of fiber drums to replace the steel when they are worn out.

The Westinghouse Electric & Manufacturing Company

Our Pledge to Users of V-C-B

TO YOU, THE DIETITIANS OF AMERICA, WE MAKE THIS PLEDGE . . . TO MAINTAIN THE QUALITY OF V-C-B AND ALL OTHER H.B.C. FOOD SPECIALTIES AND SUPPLIES FOR DIETETIC USE. WE PLEDGE OUR ALL-OUT EFFORT TO KEEP YOU SUPPLIED AND SERVE YOUR INCREASED WARTIME NEEDS. IN TURN, WE ASK YOUR COOPERATION. WE ARE FINDING IT NECESSARY TO CURTAIL AUTO TRAVEL AND REDUCE THE FREQUENCY OF OUR PERSONAL CALLS ON YOU. AND SO THAT WE MAY ALL CARRY ON, WE ASK YOU TO PLEDGE THE FOLLOWING:

★

WILL *You*

MAKE THIS PLEDGE?

In order to help save man-power, conserve tires, gas and other vital war materials, I will co-operate by making my orders LARGER and FEWER. By such cooperation, I serve my country and help shorten the road to Victory.

Hilker & Bletsch Company **614 W. Hubbard Street** **Chicago, Illinois**

MILK *has Gone to War*

● Unlike the shortage of sugar and fats, due principally to lack of shipping facilities and misfortunes of war, a shortage of dry milk solids occurs in the face of record production within continental United States.

So vital to the conduct of the war is this essential food that 90 per cent of all spray process dry milk solids must be earmarked for use by Government agencies to supply our own fighting forces and the armies and civilian population of our Allies. Increasing amounts of roller process dry milk solids are required for emergency rations and for other war uses. The formula for army garrison bread calls for 6 per cent dry milk solids, field ration biscuits 8 per cent, pre-cooked cereal not less than 10 per cent.

No greater testimonial to the value of the non-fat solids of milk as a vital food could be found than the demands for millions of pounds by the Governments of the United Nations for their fighting forces.

When you find it difficult to maintain the best levels for proper nutritional value of bread and other food, use as much dry milk solids as conditions permit. When the Victory is won this vital food will again make its full contribution to the characteristics and food value of your foods.

AMERICAN DRY MILK INSTITUTE, Inc., 221 N. La Salle St., Chicago

has developed a new high-frequency method of fusing tin on electrolytic tin plate. By induction heating, the rough dull surface produced by electrolytic deposition of tin is changed to a smooth, corrosion-resisting finish.

News from the Food Field. A milled rice product containing substantially all the vitamins of the B complex in the unmilled rice is being manufactured by a firm in Houston, Texas, according to the *Food Field Reporter*. The milling process is described as follows: "After a preliminary cleaning, in which the grain remains in the hull but the chaff and dust are removed, as in ordinary milling, the cleaned rice is dropped into a steaming and pressure tank where it is permeated with water. In this process, the vitamins of the B complex present in the rice hulls are first dissolved into the water, after which the water containing the vitamins is absorbed by the rice kernels. These rice kernels, permeated with 'vitaminized' water, are then dropped into a large vacuum dryer where their moisture content is reduced. After the drying process, the rice is milled. It is then stored in conditioning bins, and the moisture equalized. As a result of the process, the rice is highly translucent, it has virtually the vitamin content of brown rice, without its dark appearance. During the steaming and drying process, the rice, being 65 per cent starch, becomes gelatinized and highly resilient to milling. The loss from breakage runs from 2 to 5 per cent. Yet, so long as the rice remains in the hull when processed, the same milling results are obtained."

Manufacturers have announced a reduction in the price of thiamin hydrochloride of 10 cents per gm. and of riboflavin, 4 cents per gm. The former now sells at 37 cents per gm. in shipments of 100 gm. or more and at 40 cents per gm. in smaller quantities; the latter is quoted at 65 cents per gm. in lots of 100 gm. or more, at 68 cents in smaller lots and 75 cents in 1-gm. vials. Lower prices were the result of savings derived from increased production.

"Bakon," a dried yeast product given an agreeable bacon-like taste by smoking, has recently been adopted to supply vitamins to a number of dehydrated foods, including dried soups and dried baby foods.

A new patent for salting and de-salting fish provides for the adding of a trace of papain or pepsin, or similar proteolytic enzymes to the washing solution. The enzyme serves to loosen the connective tissue of the fish flesh, so as to permit the solution to enter the flesh tissue more efficiently. The new process also involves the addition of a sulfite salt to the salting solution to keep the whiteness of the fish, and a preservative such as p-hydroxybenzoic acid to prevent the formation of mold.

An editorial in the above-mentioned publication predicted that, in addition to a greatly expanded dehydrated foods production program, there will be expansion of the quick-freezing industry. A thirty per cent increase in consumer purchases of frozen foods was accomplished in the National Frosted Foods Week, November 19–24. The success of the week was attributed to the cooperation of producers, distributors, publications and radio stations. During the campaign the saving in tin and the advantage of year-round availability of waste-free perishables were emphasized.

A new fruit combination consisting of berries, grapes, and apricots, will be marketed this year by Birds Eye Frosted Foods Company. The mix is adaptable to use as a cocktail, salad, or dessert. Syrup is included so that no sugar need be added.

"Meet the Browns." A playlet of this title written by Mrs. Florence La Ganke Harris, home economics consultant, and Mrs. Alice H. Smith, nutritionist, Cleveland Health Council, and presented at the Detroit meeting of the American Dietetic Association, depicts the life of a "typical average American wage-earning family" by means of eight short scenes representing a typical day in 1942, and is an attempt to show where and how extensively the National Nutrition Program reaches into the lives of this family. The various agencies through which the Browns gain their information about nutrition include the well-baby clinic, the grocery store, the school lunchroom, the radio, a class for wives of industrial workers, and a college class. For the benefit of the audience, a wealth of nutrition principles is woven into the script of the play, and the charts prepared for the National Nutrition Program are used as devices to emphasize the facts presented. Scenes include "Breakfast in the Brown Household"; "Well-Baby Clinic"; "Mrs. Brown in the Grocery Store"; "Lunch Time at School"; "Luncheon at the Brown Home"; "Factory Lunch"; "The College Girls Eat Lunch at the College Grill"; and "Dinner at the Brown Table." According to a letter from Mrs. Harris, dated December 16, the playlet will be published separately by *Practical Home Economics* and will be sold for 30 cents a copy. Orders should be addressed to the Lakeside Publishing Company, 468-4th Avenue, New York.

Changes in Personnel, Illinois State Institutions. Recent appointments include: Lucy Guard to Manteno State Hospital, replacing Mrs. Charlotte E. Brown; Marion Keller to Chicago State Hospital, replacing Mrs. Gladys Redfern; Lorraine Love, Lincoln School and Colony, to Chicago State Hospital; Elizabeth Graves to East Moline State Hospital, replacing Marion Keller, now at Chicago State Hospital as chief dietitian; Mildred Skinner to East Moline State Hospital; Mrs. Vera Armin to Training School for Boys, St. Charles; Mrs. Leroy Weiss Mintz (Estelle Mills) to Training School for Girls, Geneva. Ethel Jones, formerly experimental dietitian for the Department of Public Welfare, has been appointed State Nutritionist, replacing Genevieve Bucknell, now assistant business director, Women's Residence Halls, University of Washington.

District of Columbia Dietetic Association. Officers for 1942–43 are: president, F. Louise Hagel, consultant dietitian, Washington Medical Building; president-elect, Mary Warmuth, Providence Hospital; treasurer, Louise Clark, Mt. Alto Hospital; secretary, Alice Latson, Children's Hospital; and national delegate, Mildred Parker, St. Elizabeth's Hospital.

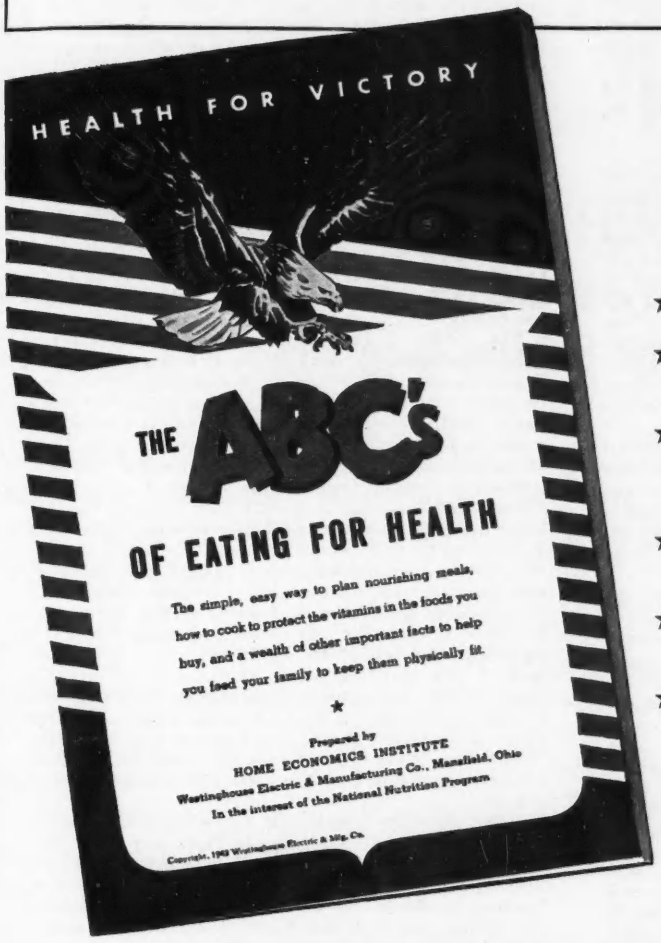
The association arranged an exhibit on the adequate diet, also the diabetic and obesity diet, for the annual meeting of the Graduate Nurse Association of the District of Columbia. A group of the members have also completed three weeks' menus, with nutritive values of foods, costs and recipes, for the nursery schools in the District. Mrs. C. B. Pear, Jr., served as chairman of a committee which has just completed a "Minimum Adequate Budget Guide for Social Workers." In January a consultant committee, composed of representatives of the Children's, Doctor's, Georgetown University, Providence, Sibley Memorial and Walter Reed Hospitals, aided by volunteers who were formerly hospital dietitians, began another project concerned with an investigation and analysis of menus and diets for certain institutions not employing dietitians at present.

Massachusetts Dietetic Association. Mrs. Genevieve S. Connick, dietitian in charge of the Phillips House, Massachusetts General Hospital, was co-author of an article entitled "Diets in General Surgery" published in the *American Journal of Surgery* for November. Mrs. Connick collaborated with Dr. Knowles B. Lawrence, surgeon, in the writing of this article.

Adele Friedman Dronsick, formerly therapeutic dietitian at the Beth Israel Hospital, is now doing nutrition work with Red Cross units in Washington, D. C.

Doris Cummings is conducting a 30-hour Red Cross

Authentic Nutrition AS WOMEN LIKE IT!


HEALTH FOR VICTORY
THE ABC's
OF EATING FOR HEALTH
The simple, easy way to plan nourishing meals, how to cook to protect the vitamins in the foods you buy, and a wealth of other important facts to help you feed your family to keep them physically fit.
★
Prepared by
HOME ECONOMICS INSTITUTE
Westinghouse Electric & Manufacturing Co., Mansfield, Ohio
In the interest of the National Nutrition Program

16-PAGE BOOKLET HIGH-LIGHTS THE IMPORTANT FACTS ABOUT THIS FASCINATING SUBJECT IN SIMPLE, NONTECHNICAL LANGUAGE

- ★ **Why the Right Foods are Important**
- ★ **How to Plan Health-Building Meals for Different Types of People**
- ★ **What Different Vitamins and Minerals do for You . . . and what happens when you don't get enough**
- ★ **How to Protect the Vitamins in Foods when Cooking**
- ★ **Why it is Important to Keep Food Fresh . . . and how to do it**
- ★ **What to Look for in Buying Foods**

Written for the layman, this booklet treats scientific facts about nutrition in a simple, easy-to-grasp manner. It is authoritative—carries the seal of acceptance of the Committee on Foods and Nutrition of the American Medical Association. Use it as a textbook in your elementary nutrition courses, or as a quick refresher for yourself.

SEND FOR FREE COPY

No charge for desk copies of "THE ABC's OF EATING FOR HEALTH" for home economists and teachers. Extra quantities available at 1½c each. Write . . .

CONSUMER EDUCATION SECTION
WESTINGHOUSE ELECTRIC & MFG. CO., MANSFIELD, O.

TUNE IN ON JOHN CHARLES THOMAS, WESTINGHOUSE PROGRAM, NBC, SUNDAY AT 2:30 P. M., E. W. T.

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ELECTRIC APPLIANCE DIVISION

course at the Newton Hospital. Graduates of this course volunteer 100 hours of service.

Janette Kelly acted as chairman of the "Share-the-Meat" program for the Boston HEWIBS. A demonstration which has been worked out in cooperation with Mae Foley, state extension nutritionist, will be used to train local leaders who in turn will give the demonstrations throughout the state as a part of the above program.

Nellie Burns, dietitian at the Framingham Union Hospital, is now at the Fitchburg Hospital, and Alma Hersey, New England Baptist Hospital, is doing community health work in Quincy.

Mrs. Ella Delaney Cameron has resigned her position at the Winchester Hospital to return to her home in Halifax, Nova Scotia.

Pittsburgh Dietetic Association met on November 3 at the Carnegie Museum to view a display of "American Homes in Miniature," following which a business meeting was held, with reports on the Detroit convention and a discussion of "Red Cross Canteen Courses in Relation to Hospital Cooperation." A special meeting was called November 17 at the Allegheny General Hospital to discuss the Canteen Course problem with Mrs. Frank Thornton of the Pittsburgh Red Cross. No definite conclusions were reached.

The annual Christmas party was held at the Presbyterian Hospital with Jennie Barton as hostess. In place of exchanging gifts a contribution to the Children's Christmas Fund was made.

Among the former student dietitians who have returned to the field are Marian Irvin Gordon who is volunteering one day a week at the Shadyside Hospital, and Hortense Berger Broadley who is working half days at the Presbyterian Hospital. Elizabeth Flannigan, formerly of Detroit, is now at Sewickley Valley Hospital as assistant dietitian.

News From our Advertisers and Exhibitors. Under the direction of Mary Ellen Baker of the Home Economics Department, *National Biscuit Company*, attractively illustrated leaflets of the new Nabisco test kitchen and spring notes of "Cracker Chatter" have been prepared for distribution. Invitingly arranged menus for birthday parties and holidays are included, also recipes for more substantial requirements such as meat loaf, chowders and stuffed green peppers. Folders entitled "How to Give Your Family a Balanced Diet"; "U. S. Needs Us Strong"; "Nabisco 100% Bran"; and "Quantity Recipes for Camps" will be forwarded upon application to the National Biscuit Company, 449 West 14th St., New York City.

A folder from Mary Pearl, home economist for the *Maltex Company*, Burlington, Vermont, encloses a food value card showing a recent analysis of Maltex which states that 30 gm. dry Maltex cereal provides 23 gm. carbohydrate, 5 gm. protein, .5 gm. fat, .5 gm. ash, .016 gm. calcium, .081 gm. phosphorus, 1.14 mg. iron, .15 mg. copper, 50 I.U. vitamin B_1, 46 micrograms riboflavin, 142 micrograms niacin, and 115 calories.

Mary Hale Martin, director, Department of Home Economics, *Libby, McNeill & Libby*, Chicago, has prepared a most attractive booklet entitled "How to Plan Nutritious Meals" which contains informative data on carbohydrates, fats, proteins, minerals and vitamins, describes the vitamin content of various foods, and also includes breakfast, luncheon and dinner menus for each day of the week. The illustrations in color are especially attractive.

Armour and Company has published a large, illustrated booklet, called "Food for Freedom," and printed for the benefit of Armour employees and others, which tells the part that Armour products are playing in the war effort. Over 20 million meat animals per year can be handled by Armour and Company's 40 plants, and 64 additional plants supply shortening, cheese, poultry, and powdered eggs for Lend-Lease shipments and for civilian and military needs. Other products include: leather, wool, glycerin, pharmaceuticals, and other war necessities. Pictures of Army meals and Army menus are included in the booklet and certain pertinent statistics, such as the fact that "not one man in ten ate as well at home as he does in the armed forces today." The story of the development of "boneless beef" and its advantages is told, and of the field rations for various Army units which the company produces, also the canned loaf meats and bacon. The products which have been discontinued for the duration are pictured as well as those which will be continued. It is stated that certain temporary shortages may occur in the products which will be continued, such as meat spreads, meat loaves, and tongue, sausage, and frankfurters.

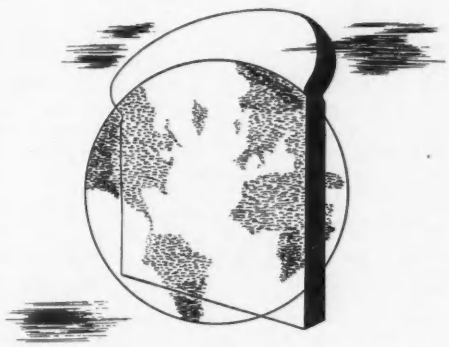
The *Charles B. Knox Gelatine Company, Inc.*, Johnstown, New York, has assembled for distribution a collection of booklets, folders, and leaflets of recipes, feeding formulas, diets, and the correction of disorders, in which gelatine is used. Among these are the following: "Reducing Diets and Recipes"; "Feeding Diabetic Patients"; "Help with the Diet in Colitis"; and "Mrs. Knox's Sugarless Desserts and Salads."

The "Story of Food Preservation" by Edith Elliott Swank, published by *H. J. Heinz Company*, Pittsburgh, Pennsylvania, tells the history of food preservation from its infancy and crude methods to the present scientific background of this industry. Here is a timely book of facts regarding food—some obscure but fascinating—some lively and important to our present wartime economy. Frontier customs of keeping food, storage habits of animals, the romance of the search for spice, Indian hunting tales, and fables and facts about Johnny Appleseed are related. Also included are pertinent points about the food industry today, the causes of food spoilage, pure food laws, government inspection, food tests, and consumer aids and services. Folders suggesting excellent ways of presenting this story of food preservation to grades four through nine, for whom it is especially appropriate, are available under a "Teacher's Guide." The story lends itself particularly well for use in general science, the area of social studies, and in the field of home economics. In addition this company offers free of charge the loan of 16 mm. sound motion pictures entitled "Yesterday, Today and Tomorrow" and "Ever Since Eden," both relating to the history of the preservation of food.

A new approach to nutrition via the comic strips is presented in a booklet "Eat Right to Work and Win," published by *Swift & Company* as a contribution to the National Nutrition Program, and illustrated by artists of the King Features Syndicate. It was issued under the sponsorship of the Office of Defense Health and Welfare Services and the OCD, according to Frances Puccini, Institute of Public Relations, and is being distributed through the 10,000 local OCD councils and other nutrition committees. The booklet is cleverly written in a humorous style and each page bears a comic strip illustration of some nutrition principle, in which a familiar comic strip actor takes part. The center of the book has a chart showing what foods are needed every day, which can be tacked on the kitchen wall.

The Cuisine Service of the *Kraft Cheese Company* suggests as a protein main dish, Chili Lima Beans, made with dried Lima beans, onion, chili powder, canned tomatoes, and "Old English" Cheddar cheese. The recipe is available on request.

A new and elaborate "Nutrition Yardstick" has been prepared and published by the Department of Nutrition of the *National Live Stock and Meat Board*, Chicago. The form is a "graphic calculator for measuring the food value and adequacy of daily diets" which was designed and produced by the Graphic Calculator Co., Chicago. On a series of



VALLEY FORGE
all around the world
and good enriched white bread

In February during this year of war, our thoughts turn to the birthday of the Father of His Country and the hardships his men suffered during that cruel winter at Valley Forge.

This year, we face a second Valley Forge—from the shores of Tripoli to the corner grocery store.

The going will be tough, make no mistake—for all of us!

American bounty, as we have known it, is out for the duration. More and more rationing is on the way.

So let's pull in our belts, get plenty of rest, husband what we have and eat plenty of good, enriched white bread.

For of bread—enriched white bread—there is plenty for all. Plenty for the dinner table. Plenty for the dinner pail of the men who need their strength to make war goods. Plenty for the school lunch box, the after-school snack, before-bed supper. Eat bread—enriched white bread—without stint. It's enriched with certain vitamins and minerals*—nutrients required for all-out wartime activities. Eat many, many slices a day. There's energy in every slice—and there's victory in energy.

**Thiamine, niacin, and iron.*

Department of Nutrition

American Institute of Baking

10 ROCKEFELLER PLAZA · NEW YORK, N. Y.

ACCEPTED AMERICAN MEDICAL ASSN

Please send me your new literature on "Enriched White Bread."

*Name*_____

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AD 15

thermometer-like columns the mineral and vitamin content of the foods consumed can be registered by means of moving slides, and whether the diets are adequate is shown through the use of three colors indicating "danger zone," "subsistence zone" and "adequate zone." Food value tables for the computation of diets are included, and the whole folds into a 4″ by 9″ packet. Single copies may be purchased for one dollar, according to a statement on the packet.

Under the direction of Mary Pearl, home economist, the *Maltex Company*, Burlington, Vermont, offers an interesting and valuable collection of educational material presented in cooperation with the national nutrition program. Owing to popular request, some of the items have been continued from last year and many new features have been added. Among the latter is an individual breakfast chart on which each pupil may keep a record of breakfasts eaten for a month, at the end of which names of students who have a perfect record may be sent to the company who will in turn send a colorful Victory Certificate for each. Also new and of special appeal to older students and adults, is a booklet entitled "The Right Food for Your Family" containing a pattern showing essential foods in the daily diet, a low-cost marketing list, and menus for one week. A new play, "The Vitamin Alphabet," will be helpful in school assembly programs. The 1942 wall chart showing the sources of food constituents, and the work book of drawings of common foods, have been revised for 1943. For primary readers a gay little booklet in four colors tells the story of Ned and Nancy's correct eating habits in relation to good school work and health. Blotters displaying the essentials of a 100% breakfast, recipe folders, and menus for serving 100 people are among the many additional offerings, all of which may be obtained upon application to this company.

During 1943 Americans will lean more heavily on a stronger staff of life. Not only will more good bread be available, but all of our popular white breads will be enriched with vitamins and minerals natural to whole wheat. American bakers, some 20,000 of them, expect to produce at least 15 billion pounds of enriched white bread in 1943, according to Dr. James A. Tobey, Director of Nutrition, *American Institute of Baking*. In 1942 the baking industry produced about 12 billion pounds of bread, which was 25% more than in the previous year. In helping to relieve shortages of other foods, breadstuffs will provide about 40% of our calories in 1943, says Dr. Tobey. At the end of 1942 more than 70% of all our white bread and flour had been enriched by the voluntary action of American bakers and millers, but in 1943 all of it will be enriched with vitamins and minerals by order of Food Administrator Wickard. It is significant, says Dr. Tobey, that the first order issued by the new Federal Food Administration is concerned with bread, our most abundant, most economical, most popular, and one of our most nutritious foods.

THE NATIONAL MORALE

Because Americans trust themselves more than their parents, they also trust themselves more than their generals, leaders, officials. This means "that we can only move forward as a whole people" and that our leaders' appeal to us must be as people like ourselves.

Washington must not lay down hard and fast rules of action. "Our strength comes out when we feel that we are grown up and in control, but ebbs away from us when we feel a parent hand."

Suppression of bad news for the sake of "morale" is a fatal mistake. When it happens, the American looks at his leaders with a "strong suspicion that our 'morale' is just another name for your skins."

Success, not class, is the American standard of a man's value, rooted deeply in the Puritan belief that toil and struggle are the proper works of man. "In his parents' every gesture, the child learns that although they want to love him very much . . . they are not quite sure that he will deserve it, that when they check him up against the baby book and the neighbor's baby, he will come out A-1 and so worthy of complete, blind love."

Thus, from the first, a child must struggle in competition if he is to be loved and respected. All that he does is judged by father, mother, teacher, friends, in terms of how good or bad it is in relation to the behavior of others.

To the American's passion for success, says Dr. Mead, must be added other deep-rooted characteristics. One is the conviction that an American must be able to "take it." But as a balance to this "toughness" is the expanded American form of British "fair play"—the dislike of "picking on" a weaker person.

Finally, there is the old chip-on-the-shoulder tradition: there must be an excuse for violence before the American can feel morally justified in being aggressive.—*From a review of Margaret Mead's "And Keep Your Powder Dry" in Time, November 30, 1942.*